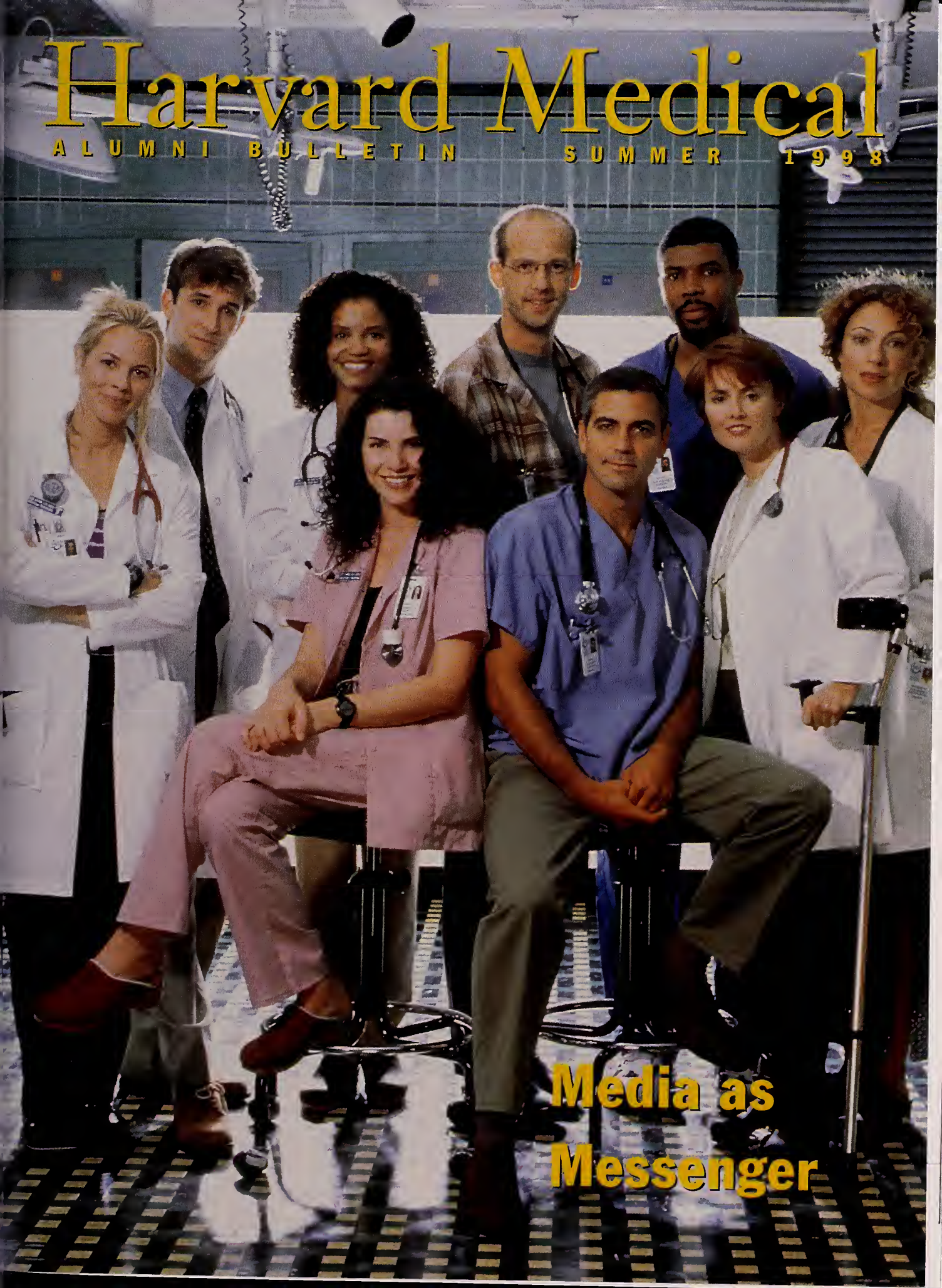
Harvard Medical

ALUMNI BULLETIN · SUMMER 1998



Media as Messenger

photo by Joe Wrinn

Flashback to 1981:
The media were messengers of the best kind of news at HMS when faculty members David Hubel and Torsten Wiesel were awarded the Nobel Prize in Medicine or Physiology. After a partnership that spanned decades, the two were celebrated that October for their pioneering work on the way the brain analyzes visual information.

They described their work as a 50-50 effort. "It's been a real Gilbert and Sullivan sort of thing—not that we would compare ourselves to those celestial people," said Hubel.

Hubel is now the John Franklin Enders University Professor of Neurobiology. Wiesel, who left HMS in 1983, is the president and the Vincent and Brooke Astor Professor Emeritus at Rockefeller University.

Summer 1998
Volume 72 Number 1

Harvard Medical
ALUMNI BULLETIN

Actors as doctors on "ER."

20 Behind the Headlines
by Susan Okie
The challenge of responsible reporting.

24 The Doctor in the House
by Elissa Ely
A conversation with Timothy Johnson.

26 Truth in Television
by Neal Baer
Verisimilitude on the "ER" set.

32 Border Crossing
by Don Gibbons
Scientists have an obligation to cross the border and communicate science to the public.

34 Dear Doctor
by Sarah Jane Nelson

36 Pressing the Issues
by Ellen Barlow
Former FDA commissioner David Kessler '77 on the media's role in changing public policy.

40 The Art of Being There
by Eileen McNamara
A special bond between doctor and patient.

42 Legacy of the Village Healer
by Diane Speare Triant
A boy from a small Greek village makes his way to HMS in the 1920s.

Departments

3 Letters

4 Pulse
New CEO of CareGroup, upgrading technology, changing color of AIDS, new agent to diagnose Parkinson's, match results, summer Spanish program.

13 On the Quad

14 Alumni Council
Spinning a New Web

15 Benchmarks
Leptin's Path Traced Through the Brain
by Gabrielle Strobel.

18 Book Mark
A Surgeon in Combat
by William V. McDermott,
reviewed by J. Gordon Scannell

50 Alumni Profile:
Christopher Percy '83

51 Alumni Notes

54 Remembrance
Mary Raugust Howell
by Elissa Ely

55 Death Notices

Inside HMAB

To my very limited knowledge, medicine didn't figure much in the Western media before about 1800. There was pathology, to be sure; *Philoctetes* depends on a wound that won't heal, but no physician attends it. Not quite two thousand years later, a prosperous doctor of physick travels with Chaucer's other, generally more interesting, pilgrims. In *Macbeth* Shakespeare issues a plaintive but passing request for a specialty of psychiatry to be developed. Molière, at last, moves quacks and hypochondriacs to center stage, but these roles revert to walk-ons in the theater that follows. The sparse representation of physicians was not for lack of practitioners in society, but clearly reflects some lack of dramatic interest in them.

Romanticism, with its focus on the morbid, engaged physician characters rather more generously, but mostly in supporting parts. Beginning 125 years ago, however, George Eliot, George Bernard Shaw, and Sinclair Lewis in succeeding generations found tension enough in doctors' lives and the calling of medicine to keep a plot in motion. Since the broadcast media emerged in this century, medicine has been an indispensable fuel of their fiction. (Fifty years ago, the radio show "Dr. Christian" was broadcast after my bedtime, so I would have to take the radio under my covers to hear the weekly half-hour episode.)

Now, "E.R." is broadcast after my bedtime. But even I am, when awake, swept up in the sheer speed, histrionics, and ethical fervor of the show. Although the immediate antecedents of this kind of theater appear to be let's-put-on-a-play, foxhole and spaceship scripts, in which a group of people are thrown together for a common and perilous purpose, the genre owes much to and provides much of the satisfaction of morality plays.

And it owes everything to the steady popularization of medicine in all the media. The terrain of the body has become as recognizable as the swamps, forests, and castles of romance, and a Bayesian ambiguity has been gingerly introduced to the moral awareness of the audience, enhancing their appreciation of the awfulness of the choices that physicians so often must make.

William Ira Bennett '68

Harvard Medical
ALUMNI BULLETIN

Editor-in-chief
William Ira Bennett '68

Editor
Ellen Barlow

Associate Editor
Jane Buchbinder

Assistant Editor
Sarah Jane Nelson

Book Review Editor
Elissa Ely '88

Editorial Board
Carl Aschkenasi '01
Elissa Ely '88
Robert M. Goldwyn '56
Joshua Hauser '95
Paula A. Johnson '84
Jennifer Kim '01
Victoria McEvoy '75
James J. O'Connell '82
Gabriel Otterman '91
Deborah Prothrow-Stith '79
Guillermo C. Sanchez '49
J. Gordon Scannell '40
Eleanor Shore '55
John D. Stoeckle '47

Design Direction
Sametz Blackstone Associates, Inc.

Association Officers
Robert S. Lawrence '64, president
George E. Thibault '69, president-elect 1
Sharon B. Murphy '69, president-elect 2
Roman W. DeSanctis '55, vice president
David D. Oakes '68, secretary
James B. Field '51, treasurer

Councillors
Claire V. Broome '75
David P. Gilmour '66
Laurie R. Green '76
Katherine L. Griem '82
Gerald T. Keusch '62
Eric Larson '73
Alison G. May '91
Gilbert S. Omenn '65
Deborah J. Oyer '87
Morton N. Swartz '47

Director of Alumni Relations
Daniel D. Federman '53

Representative to the Harvard Alumni Association
Chester d'Autremont '44

ID Statement:
The *Harvard Medical Alumni Bulletin* is published quarterly at 25 Shattuck Street, Boston, MA 02115

© by the Harvard Medical Alumni Association.

Telephone: (617) 432-1548. Email address: bulletin@warren.med.harvard.edu. Third class postage paid at Boston, Massachusetts. Postmaster, send form 3579 to 25 Shattuck Street, Boston, MA 02115, ISSN 0191-7757. Printed in the U.S.A.

Letters

Lost and Found

Several months ago on a trip to Boston, I decided to look up one of my old mentors, Hermann Lisco. After some difficulty I was able to find him and we had a most enjoyable visit.

Sometimes it is easy for us in our busy lives to forget those who have helped and guided us. Since Dr. Lisco was a mentor for many of us in the early and mid 1970s, I would like to encourage others to renew their contact with him as well. For me he is certainly one of Harvard's special people.

His address is Dr. Hermann Lisco, c/o the Hebrew Rehabilitation Center for the Aged, 1200 Centre St., Roslindale, MA 02131. The phone at the main desk is 617-325-8000. His phone is 617-363-0349. His wife, Lisa, lives nearby in Jamaica Plain.

Kathryn A. Zufall-Larson '75

Live Long and Prosper

It is truly amazing! Once, yet again, that incredible band of rascals in the editing department of the HMAB have turned out a prizewinner in the "least stodgy alumni magazine" sweepstakes!

Plucking one pearl from a handful, I respond forcefully to Dr. Andreadis's daring and articulate lament for the death of transdisciplinary openness in science, where the grim reality of contemporary departmental research appears to be ruled by the "droit de seigneur" of feudalism: first describe, then interpret. That is spiritual poverty indeed.

On the far more pleasant note, her memories of "Star Trek" showed uncanny parallels with my experience a generation earlier. The first season of "Star Trek" aired when I was in medical school. Every show was a stunning surprise. A small but stable group of guilty pleasure seekers would congregate at the color TV on the ground floor of the Deanery in Vanderbilt Hall for that sacred hour—devil take the studying for that span. Though it was long ago, I recall the thrill of the mail-in campaign that supposedly saved later seasons of the show, and the observation by our group that although danger was frequently found on some distant planet, it soon somehow managed to get aboard the ship, forcing the crew to deal with it at immediate range. The symbolists among us declared that this was rather like the practice of medicine, where you cannot remain disengaged.

I salute Dr. Andreadis for her courageous, poetic, uplifting and original work. May her doomsaying, mean-spirited colleagues who discouraged her forthcoming book be nibbled by tribbles for eternity.

Thomas G. Gutheil '67

Heber Not Haber

We'd better set the record straight: Reginald Heber Fitz most definitely did not spell his middle name Habar ("Leaders of Pathology, HMAB Spring 1998). We did not spot the error until it was already in print and we received a call from someone in a position to know: the grandson of the illustrious Shattuck Professor, Reginald Heber Fitz '45.

PARIS
LEFT BANK

We offer rental of our spacious, well-appointed 17th century apartment home. The period decor includes all modern conveniences. The location is the finest in Paris, on the Rue de Varenne, 7th Arrondissement. Maid service and our *Guide to the Best of Paris* are included for free.

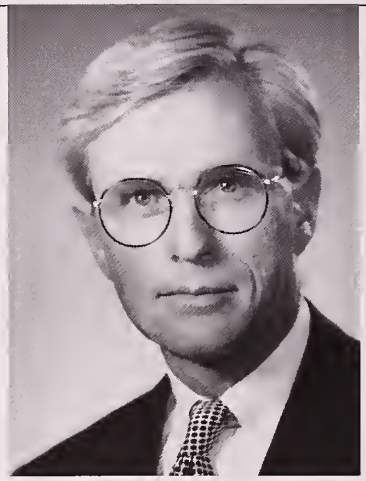
ST. BARTS
CARIBBEAN

We offer rental of our wonderful home on the ideal tropical island. Our spacious property has a private pool and is carefully-tended, perfect for honeymoons and relaxing vacations. Maid service and our *Guide to the Best of St. Barts* are included free of charge.

(650) 327-2415

Please call for further particulars. It will be a pleasure to assist you.

Pulse



James L. Reinertsen

New CEO of CareGroup Named

James L. Reinertsen '73, president and CEO of HealthSystem Minnesota and a nationally prominent innovator in the delivery of high quality health care, will become CEO of CareGroup in July. Reinertsen, who has led HealthSystem Minnesota since 1994, will succeed Mitchell T. Rabkin '55 as head of the Boston-based network, one of the largest in the Northeast.

"CareGroup is a national example of what's right, rather than what's wrong with health care," said Reinertsen, who will be returning to Boston where he has not lived since medical school. "I look forward to working with CareGroup's nurses, doctors, investigators, teachers, and community leaders to make CareGroup even more valuable to those we serve."

"Over the past two decades, Dr. Reinertsen has been a national leader in thought and action in the improvement of health," Rabkin noted. "His work at HealthSystem Minnesota fits exactly our emphasis at CareGroup on bringing value in health care to the communities we serve, in terms of both technical and human quality, along with a judicious use of resources."

Rabkin, who had been president of Beth Israel Hospital from 1966 until its merger with Deaconess Hospital to form Beth Israel Deaconess Medical Center in 1996, announced last year that he would retire from CareGroup following the selection of a successor. The medical center was a founding hospital of CareGroup, of which Rabkin was the first CEO.

After Reinertsen moves to CareGroup in mid-July, Rabkin will continue as co-chair (with Harvard Medical School Dean Joseph B. Martin, MD, PhD) of the Institute for Education and Research, a joint endeavor of Harvard Medical School, Beth Israel Deaconess, and Mount Auburn Hospital. Rabkin plans to turn his attention to teaching and building philanthropic support of teaching and research at the institute.

Upgrading IT

An HMS initiative to create a long-term vision for information technology (IT) within the school and its affiliates has been launched by Dean Joseph B. Martin. "We are in an age where IT has become central to all aspects of the school's mission and will be a major catalyst for advances in education, research and patient care," Martin explains. The first steps towards the school's upgraded future include a new research computing facility, new computers for students and postdocs, and a clinical training grants program.

The Research Computing Center will license widely used applications, such as DNA sequencing software, offer training, and provide access to electronic resources like protein databases and computer graphics. Services are due to grow in the near future from the Quad to the broader Longwood Medical Area, says Bob Freeman, director of research computing.

Computing facilities on the Quad are also being expanded. The number of workstations in the MEC will increase from 62 to 108, with staff added for assistance. This project is due to be completed over the summer.

Martin also announced the Dean's Clerkship Innovation Fund, an annual grant stream of $300,000 to back innovative uses of information technology in clinical clerkships. The purpose is to spawn Intranet-based resources available to students and faculty at every training site.

This IT initiative is intended to do more than just update the many network-based projects already in existence at HMS. It represents a "phase shift" in the school's use of digital technology. Daniel Moriarty, associate dean for information technology, explains that IT has moved away from a centralized model with a mainframe computer. The model for the 1990s is "local initiation and broad implementation based on common standards," possible now because of the growth of networks and Web technology. "We can have our cake and eat it too," Moriarty observes, "because we can support local efforts that are linked."

decor international

141 newbury st., boston
262-1529

Vegetable dyed folk rugs
depicting Turkish village life.

orientals
antique, tribal, Tibetan

handwoven rugs

orientals • village rugs • Polish
Romanian • Tunisian • Navajo
American hand-hooked
• tapestries • folk art
Free Validated Parking

The Changing Color of AIDS

Over 15 years ago, when the first alarms of AIDS awakened mainstream America, the epidemic promised to be a white one. But by 1996 the face of AIDS had changed color.

In 1985, early in the epidemic, whites constituted 60 percent of all cases; last year 35 percent of all AIDS patients were white. In that period the proportion of blacks shifted from 25 percent to 45 percent. And by 1997, Hispanics, who represent only 11 percent of the United States population, accounted for almost 20 percent of AIDS cases. These shifts have occurred during a period when the incidence of AIDS was increasing; in 1996 the number of new cases began to fall and has continued to decline.

These trends were the topic of two meetings held this spring at HMS. The Untold Story: AIDS and Black America was sponsored by the Harvard AIDS Institute, the Kaiser Family Foundation, and Leading for Life, a black activist organization. The other meeting was also organized by the Harvard AIDS Institute and Kaiser Family Foundation, along with the leaders of several Hispanic health organizations, who gathered to discuss the spread of AIDS in their community.

A major route of AIDS transmission in the Hispanic community is sex between men, but an AIDS Institute report notes that in Hispanic communities homophobia has forced this behavior underground, where it is harder for prevention programs to take hold. According to the report, there is more reluctance to use condoms in Hispanic communities. The report also notes that among Hispanic women there are many misconceptions about how the infection is spread.

According to the Centers for Disease Control and Prevention (CDC), one-quarter of all pediatric cases of AIDS affect Hispanic children, who are six times as likely as white children to have the diagnosis. And black children account for 58 percent of pediatric cases. Black women, at 56 percent of cases among females, have been the hardest hit to date.

Henry Louis Gates Jr., director of the W. E. B. Du Bois Institute for Afro-American Research, called for the action of community leaders: "We're at war with a terrible disease, but it's not galvanizing our leaders. They don't know how to deal with this epidemic." According to a survey sponsored by the Kaiser Family Foundation, more than half of blacks believe that AIDS is the nation's leading health problem. This has helped to shape an increased concern about the problem and has spurred more people to take action.

The CDC urges that prevention efforts take account of language and cultural barriers as well as social and economic factors, such as poverty, underemployment and inadequate access to the health care systems.

In the face of such discouraging data, several grassroots initiatives have been developed to reach Hispanic and black Americans. According to the CDC, "the most effective programs are those designed and implemented by the community itself."

Professor Henry Louis Gates Jr. (right) discusses the problem of AIDS among black Americans with (left to right) Sophia Chang of the Henry J. Kaiser Family Foundation, Helene Gayle of the Centers for Disease Control and Prevention, and Mario Cooper of Leading for Life.

photo by Jane Reed

New Agent to Diagnose Parkinson's

Early diagnosis of Parkinson's disease is fraught with uncertainty—made incorrectly one out of five times, even when the hallmark symptoms are displayed. But a new imaging agent developed by HMS researchers—a chemical called Altropane—may make possible quick, definitive diagnoses.

In four back-to-back articles in the June *Synapse*, scientists describe various aspects of the chemical, reporting that it can reveal the degree of nerve loss in the brains of people at various stages of this neurodegenerative disease. The basic and preclinical research reported in the first three papers was conducted by Bertha Madras, associate professor of psychobiology in the HMS Department of Psychiatry, in collaboration with chemist Peter Meltzer, president of Organix Inc., and others. The fourth paper presented clinical results with Altropane, directed by Alan Fischman, HMS associate professor of radiology at MGH.

Madras discovered Altropane while researching cocaine's action in the brain. In 1988 she found that a tropane, a chemical that has the basic skeleton of cocaine, binds to the dopamine transporter. People with Parkinson's gradually lose their dopamine neurons, so Madras reasoned that an agent that lights up dopamine transporters on these neurons could be used to reflect the degree of neuronal loss, and thus progression of the disease. She and her collaborators synthesized Altropane, a novel kind of tropane, and attached a radioactive label to it, turning it into an agent for single photon emission computed tomography (SPECT) imaging.

Scientists in the United States and abroad are competing to develop similar imaging agents to monitor other conditions thought to involve dopamine neurons, including cocaine addiction, attention deficit hyperactivity disorder, alcoholism and aging. So far Altropane leads the pack, says Madras. "It is ten times more selective than the most advanced competing product" and can be imaged immediately after injection. "With Altropane, you have an answer in about an hour," says Fischman.

photo by Barbara Steiner

Bertha Madras

Posters displaying a broad expanse of student research projects filled the MEC atrium for the 58th annual Soma Weiss Research Day on April 23. More than 80 students presented posters.

A committee of peers and faculty selected five students to give oral accounts of their work. Eva Neer, professor of medicine at HMS and Brigham and Women's Hospital, delivered the keynote address entitled: "Adventures in the Signal Trade," about her research studying the vocabulary and syntax of the language cells used to communicate.

Soma Weiss Research Day was named in honor of physician-researcher Soma Weiss (1892-1942) and was founded by students in 1940 to provide a forum for displaying their research to peers.

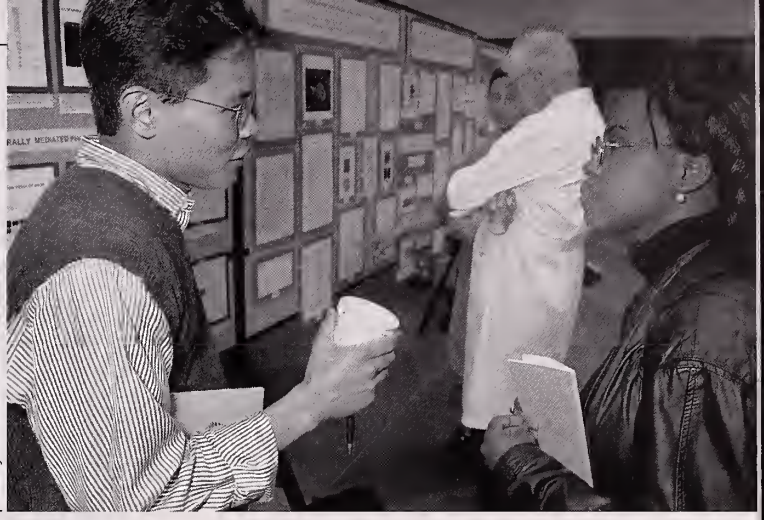


photo by Liza Green Green

Crash Course in Spanish

This summer marks the fifth HMS Summer Spanish Program, in which 20 first-year students will take a crash course in medical Spanish, then practice and improve what they have learned at a community health clinic serving Spanish-speaking patients.

Most volunteer in Boston or another U.S. city, but a few will go to Latin America. They learn that communicating in the patient's language is only the first step to being a doctor in an underserved area, points out Audrey Bernfield, director of the HMS Office of Enrichment Programs. She and Manuel Guillermo Herrera-Acena, lecturer on ambulatory care and prevention at HMS, organize the program.

The following is a description by Shannon Heitritter, HMS '00, who spent three weeks working in an orphanage and clinic in San Bartolomé, Guatemala.

Having served in a developing country before, I thonght I wonld be prepared for what I would find in the orphanage and tiny clinic. I was wrong. Nothing could prepare me to hear the stories of abuse and neglect that often preceded a child's arrival at the orphanage. Nothing could prepare me for the completely disorganized medication distribution system, which often contributes to keeping a chronically ill child sick longer. Finally, not even Señor Wright's snperb Spanish course could fully prepare me for the challenge of communicating about complex issues in rapid Spanish. And yet, by the end of my experience, I could hardly force myself to leave.

The clinic was open four hours each morning and served 150 children in the orphanage as well as patients from surrounding villages. The clinic doctor, Rocio Palacios, was an inspiring mentor. As each patient came in, Dr. Palacios taught me to take vital signs and the patient's history. She would ask further questions to elicit the patient's concerns before following with the physical exam. At the close of each clinic day, she sat with me, asking me to help her learn English as she taught me more Spanish.

Twenty-four hours in a day never seemed to be long enough. After Dr. Palacios left, I spent the rest of the day giving medicines to the sick children in their dormitories, bandaging cut knees and twisted ankles, and creating a simple system to organize medical dispensing. The hour after supper became known as "foot medicine time," because I would treat tinea pedis. Many of the children came to the clinic to soak their feet in basins of hot water and be treated with antifungal cream. It was a joyful time, since the children loved the individual treatment (and to be able to splash their friends when I wasn't looking). Next came bath and bedtime for the younger children. Nights were often spent at the bedside of a child who spiked a sudden fever or had started vomiting, or simply staying up with a frightened child because she had measles and was quarantined in a separate room.

I will never forget the lessons taught to me in this tiny clinic. As children unfolded their hearts to me, they reminded me that becoming a doctor is much more than prescribing medications. It is abont listening, caring, and treating with compassion empowered by wisdom.

Shannon Heitritter in an orphanage in Guatelmala.

Match Day Under Fire

This year residency-bound graduating students were under increasing pressure to break the match's rules of confidentiality. Says Nancy Oriol '79, associate dean for student affairs, "The aggressiveness of residency programs in recruiting has continued to escalate and increase pressure on the students."

At issue are the number of phone calls students receive from program directors who ask the students where they're ranking their program. During these calls many students are coerced into revealing their rank choice.

In addition, many residency programs are making false promises to students about guaranteed placement in the match. Because of this, students have become increasingly distressed by the lack of integrity, says Oriol.

The Office of Student Affairs is also grappling with abuses taking place in the "scramble," in which students who did not match must pursue programs with openings. "People have jumped the gun on scrambling in recent years," says Oriol.

Irregularities in the scramble process are gaining the attention of the Association of American Medical Colleges, while problems with the match are being addressed by the National Resident Matching Program Advisory Committee.

On the brighter side of Match Day, the ERAS (Electronic Residency Application System), which was initiated by the Association of American Medical Colleges in 1995, has made one aspect of the match much easier for students. This system uses Internet technology to transmit all residency application materials for each student to the hospital program to which students are applying.

Once again, students matched with a fine collection of programs across the country.

photos by Liza Green

ANESTHESIOLOGY

John Keltner
University of California, San Francisco

Harish Lecamwasam
Massachusetts General Hospital

DERMATOLOGY

Rachael Clark
Massachusetts General Hospital

Rashel Feinstein
University of Massachusetts Programs, Worcester

Joel Gelfand
Hospital of the University of Pennsylvania, Philadelphia

Edwin Joe
New York University Medical Center

Scott Sanders
New York Hospital

Valentina White
Massachusetts General Hospital

EMERGENCY MEDICINE

Travis Deuson
Harbor-UCLA Medical Center, Torrance

Michael Evans
East Carolina-Pitt City Memorial, Greenville, NC

Kirsten Greineder
University of Michigan Hospitals, Ann Arbor

Gary Little
George Washington University Program, Washington, DC

Anthony Mitchell
LSU School of Medicine, New Orleans, LA

Luis Moreno Jr.
UCLA Medical Center, CA

Paul Muñoz
University of Florida Health Sciences Center, Jacksonville

Steven Stephanides
University Hospital Inc., Cincinnati, OH

Nana Twum-Danso
Brigham and Women's, Boston

FAMILY PRACTICE

Clara Chang
Lancaster General Hospital, PA

Carlin Chi
University of California, San Francisco

Ambur Economou
Cox Medical Centers, Springfield, MO

Ilene Klein
Memorial Hospital, Pawtucket, RI

Eric Knight
Malden Hospital, MA

Victoria Smith
LSU School of Medicine, New Orleans, LA

Moya Sommerville
University of Maryland Medical Center, Baltimore

Christopher Thiessen
Duluth Graduate Medical Education, MN

Sarah Young-Xu
University of Massachusetts Programs, Worcester

INTERNAL MEDICINE

Christiana Bardon
Brigham and Women's, Boston

Jennifer Brown
Massachusetts General Hospital

Stephen Chen
LA County-USC Medical Center, CA

George Cheng
Brigham and Women's, Boston

Salvatore Cilmi
Massachusetts General Hospital

Akshay Desai
Brigham and Women's, Boston

Sanjay Desai
Johns Hopkins Hospital, Baltimore, MD

Donnah Facey
Presbyterian Hospital, New York, NY

Rachel Freelund
Beth Israel Deaconess Medical Center, Boston

Lara Goitein
Massachusetts General Hospital

Germán Hernández
University of California, San Francisco

Yen-Dong Ho
Stanford Health Service, CA

Joshua Levine
Hospital of the University of Pennsylvania

Jenny Lin
Beth Israel Deaconess Medical Center, Boston

Anjli Maroo
Massachusetts General Hospital

Yasmin Meah
Mt. Sinai Hospital, New York

Clifford Medina
Brigham and Women's, Boston

Vamsi Mootha
Brigham and Women's, Boston

Amanda Peppercorn
Massachusetts General Hospital

Jeffrey Peppercorn
Massachusetts General Hospital

Kimberly Pryce
Beth Israel Deaconess Medical Center, Boston

Stephen Servoss
Massachusetts General Hospital

Sonya Shin
Brigham and Women's, Boston

Samuel Somers
Brigham and Women's, Boston

Gregory Springett
University of Maryland Medical Center, Baltimore

Raymond Tabibiazar
Stanford Health Service, CA

Thomas Wang
Boston University Medical Center

Brett Zbar
Johns Hopkins Hospital, Baltimore, MD

INTERNAL MEDICINE/ PRIMARY CARE

Ethan Basch
Massachusetts General Hospital

Charlene Brown
New York Hospital, NY

Rebecca Cunningham
Brigham and Women's, Boston

Barna De
Massachusetts General Hospital

Mayer Ezer
Brigham and Women's, Boston

Wells Messersmith
Massachusetts General Hospital

Stephen Persell
Brigham and Women's, Boston

Eric Poon
Brigham and Women's, Boston

Thao Truong
University of Washington Affiliated Hospitals, Seattle

Toshiko Uchida
Brigham and Women's, Boston

Pulse

NEUROLOGY

Jacob S. Elkins
University of California, San Francisco

NEUROSURGERY

Abel Jaramillo
University of Washington Affiliated Hospitals, Seattle

John S. Kuo
Los Angeles County, USC Medical Center, CA

OPHTHALMOLOGY

David Chen
Tufts/New England Eye Center, Boston

Liane Clamen
Massachusetts Eye and Ear Infirmary, Boston

Michael Hee
University of California, San Francisco

Richard Levy
Manhattan Eye, Ear and Throat Hospital, NY

ORTHOPEDIC SURGERY

Jorge Casas-Ganem
University of Texas Health Sciences Center, San Antonio

Ivan Cheng
University of California Davis Medical Center, Sacramento

Erling Ho
University of Chicago Hospital, IL

Robert Hurford Jr.
Harvard Combined Orthopedic Program, Boston

Conrad Wang
Harvard Combined Orthopedic Program, Boston

OTOLARYNGOLOGY

Timothy Dawson
Walter Reed Army Medical Center, Washington, DC

Dora So
Albert Einstein College of Medicine, Bronx, NY

Marta Taylor
University of North Carolina, Chapel Hill

PATHOLOGY

Jayanta Debnath
Brigham and Women's, Boston

Melinda Fan
Massachusetts General Hospital

Harvey Greisman
Brigham and Women's, Boston

Amy Heererna
University of California, San Francisco

Guillermo Tearney
Massachusetts General Hospital

OB/GYN

Allison Bryant
Brigham and Women's, Boston

Samantha Butts
Hospital of University of Pennsylvania, Philadelphia

Micheline Chu
Yale-New Haven Hospital, CT

Jessica Fenoglio
Yale-New Haven Hospital, CT

Heather Gibson
Brigham and Women's, Boston

Karen Lee
Duke University Medical Center, NC

Hannah Parker
Brigham and Women's, Boston

Claribel Paguio
UCLA Medical Center, CA

Cindy Wang
Massachusetts Eye and Ear Infirmary, Boston

ORAL SURGERY

José Marchena
Massachusetts General Hospital

Angel Torio
Massachusetts General Hospital

Kenneth Whitworth
Massachusetts General Hospital

PEDIATRICS

Sanjay Aggarwal
Johns Hopkins Hospital, Baltimore, MD

Oscar Benavidez Jr.
Boston Combined Pediatric Residency

Marisa Brett
Boston Combined Pediatric Residency

Colleen Buggs
Children's Memorial Hospital, Chicago, IL

Ann Chen
Boston Combined Pediatric Residency

Gitta Frank
Boston Combined Pediatric Residency

Kathryn Gabrielson
Boston Combined Pediatric Residency

Laura Gandrud
Stanford Health Service, California

Katya Gerwein
Boston Combined Pediatric Residency

Chi-Cheng Huang
Harvard Combined Medicine/Pediatrics, Boston

Alexa Kemeny
Boston Combined Pediatric Residency

Stephanie Knott
University of Washington Affiliated Hospitals, Seattle

Carlos Lerner
Boston Combined Pediatric Residency

Michaela Long
University of Minnesota Medical School, Minneapolis

Michael Lukela
University of Michigan Hospitals, Ann Arbor

Jennifer Mack
Boston Combined Pediatric Residency

Andrea Marmor
Harbor-UCLA Medical Center, Torrance, CA

Tonya McDonald
Baylor College of Medicine, Houston, TX

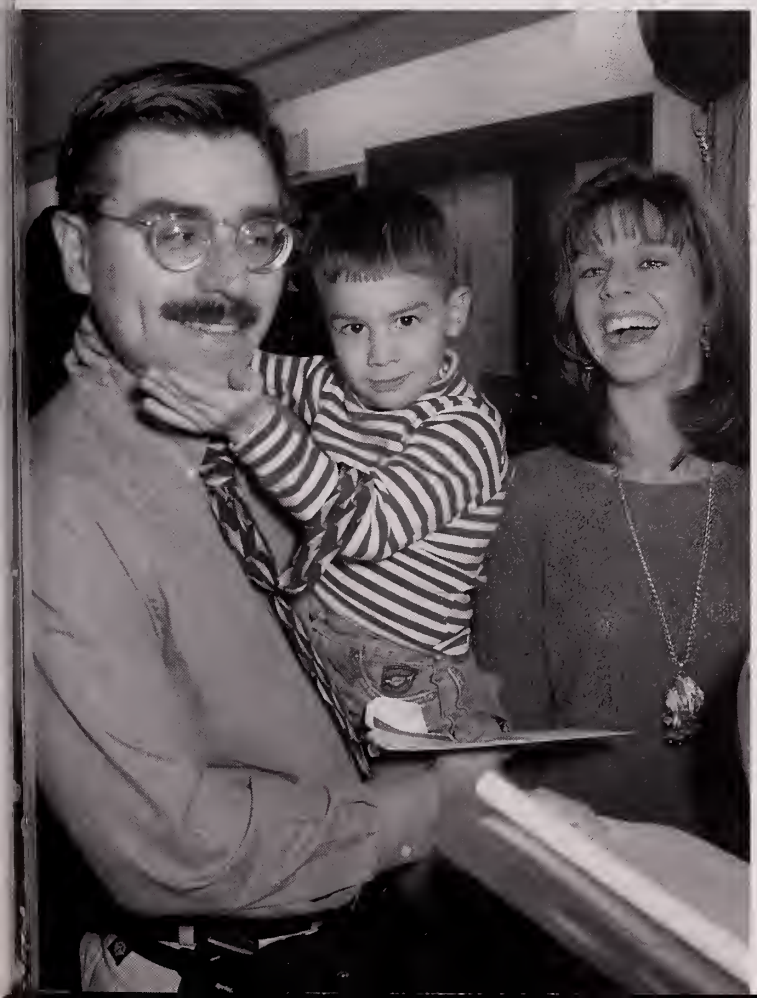
Ellen Rothman
Boston Combined Pediatric Residency

Michael Silverstein
University of Washington Affiliated Hopsitals, Seattle

Kevin Strauss
Boston Combined Pediatric Residency

Elliot Suarez
Massachusetts General Hospital

Joan Winchester
Massachusetts General Hospital



PLASTIC SURGERY

Jonathan Hutter
University of Washington Affiliated Hospitals, Seattle

Russell Reid
McGaw Medical Center, Northwestern University, Chicago, IL

PRELIMINARY MEDICINE

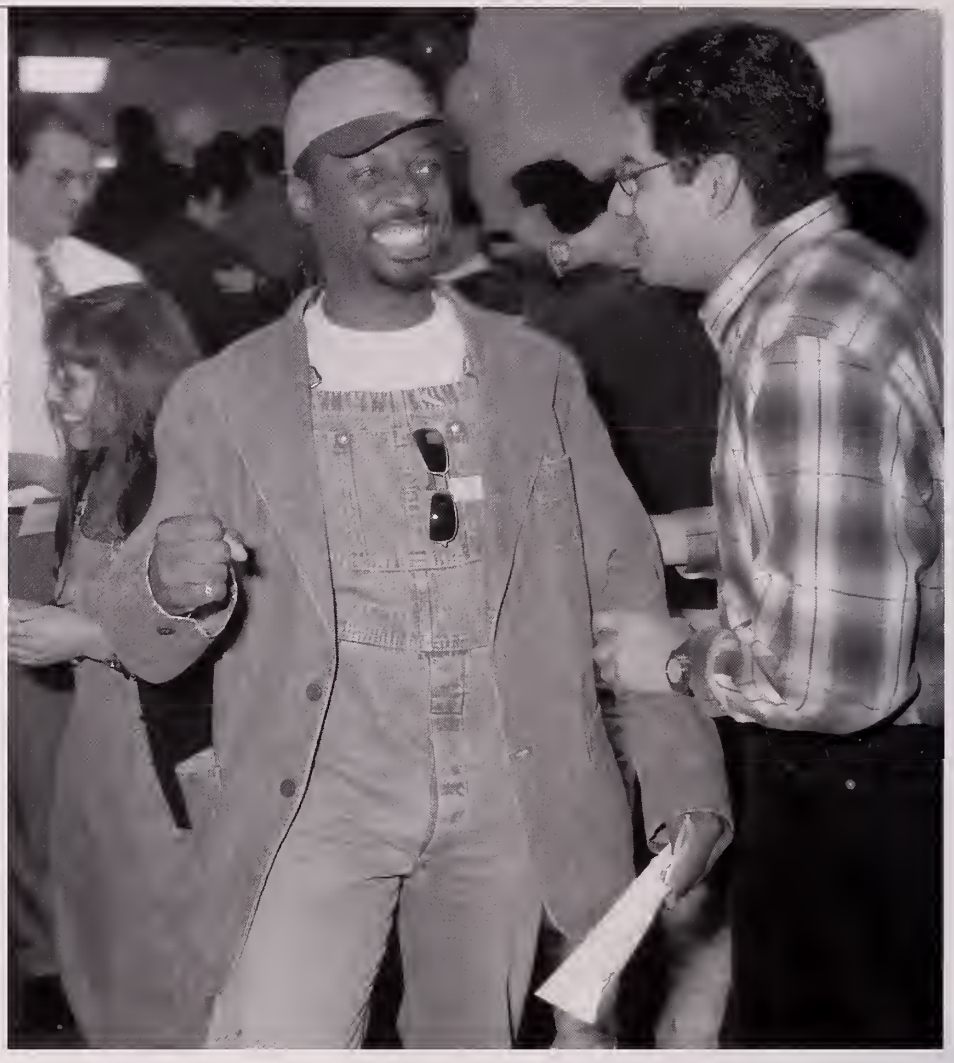
Zoltan Arany
Massachusetts General Hospital

Paula Brathwaite
Albert Einstein College of Medicine, Bronx, NY

Chiang Li
Brigham and Women's, Boston

Charles Owen Jr.
Beth Israel Deaconess Medical Center, Boston

Pulse



PRELIMINARY SURGERY

Stacy Smith
Brigham and Women's, Boston

PSYCHIATRY

Heather Heiman
Massachusetts General Hospital

Jeffrey Schulden
New York Hospital

Jonathan Shaywitz
UCLA Neuropsychiatric Institute, CA

Anna Yoo
Massachusetts General Hospital

RADIOLOGY

Tokunbo Babagbemi
Brigham and Women's, Boston

Steven Chen
Massachusetts General Hospital

Susan Hobbs
University of Minnesota Medical School

Rinaa Punglia
Joint Center for Radiation Therapy, Boston

Martin Scott
Albert Einstein Medical Center, Philadelphia, PA

David Vu
University of California San Diego Medical Center

Jun Wu
University of California, San Francisco

SURGERY

Christopher Alessi
Dartmouth-Hitchcock, Hanover, NH

Leora Balsam
Stanford Health Service, CA

Jeremy Cannon
Beth Israel Deaconess Medical Center, Boston

James Donahue
Massachusetts General Hospital

Julie Gilbert
University of California, San Francisco

Douglas Johnston
Massachusetts General Hospital

Joseph Rabban III
University of California, San Francisco

Edward Soltesz
Brigham and Women's, Boston

Frederick Tibayan
Stanford Health Service, CA

Patrick Weybright
Duke University Medical Center, Durham, NC

UROLOGY

Richard Morris
Massachusetts General Hospital

OTHER

Aria Arrizabalaga
Health Education
Mt. Sinai Hospital, New York

Myrtha Cesar
MPH in Family and Community Health
Harvard School of Public Health

Annette Kim
Postdoctoral Research Fellowship
Sloan-Kettering Cancer Center, New York

Uday Kumar
Chief Medical Officer and President
Biomedical Modeling, Inc., Boston

Tristé Lieteau
Health Law Associate
Sonnenschein, Nath & Rosenthal, Chicago, IL

Mathai Mammen
Group Leader and Member, Scientific Advisory Board
Advanced Medicine, Inc., San Francisco, CA

On the Quad

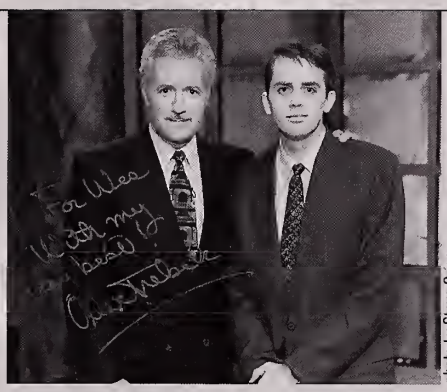


photo by Steve Crise

Wes with 'Jeopardy' host Alex Trebek

Interesting Avocations for $200

This second-year HMS student made it to the quarter-finals in the "Jeopardy" Tournament of Champions.

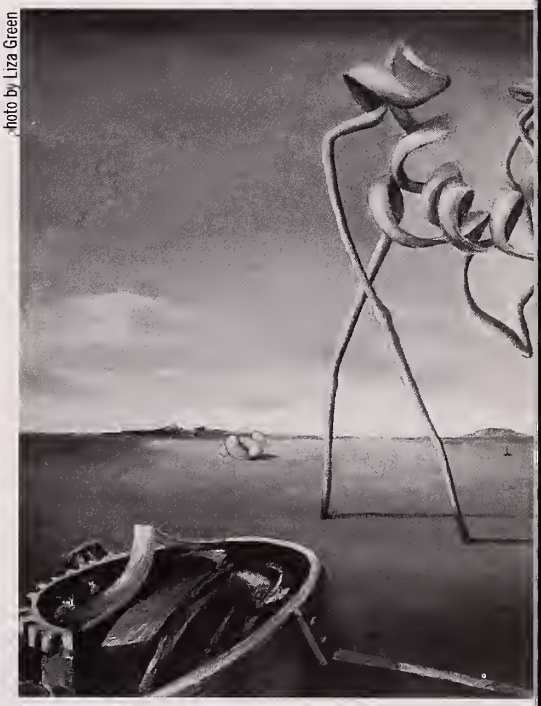
The answer: Who is Wes Ulm? Ulm was on national television in February, one of the top 15 contestants competing for the $100,000 purse. He had already won more than $63,000 and picked up an additional $2,500 from the tournament (to say nothing of the boxes of breath fresheners, topical anesthetics and other things he took home from the show's sponsors).

Enough to pay for medical school? Hardly, he says, after Uncle Sam takes a chunk. But because Ulm is also earning through research assistantships in the HST program, he may pull off the "no-debt miracle." He says, "It will certainly feel like a miracle considering what I was looking forward to at the start of school."

Creative Approaches

The painting on the cover of the February 6 *Cell* was by HMS scientist/artist Rong Li, assistant professor of cell biology. Li, who studies how cells polarize toward specific spatial signals, has been painting for ten years. She believes that her interest in art has helped her science. "The artistic mentality to be original has taught me to be more flexible and to accept creative approaches to solving problems . . . it promotes innovation."

photo by Liza Green



Painting by Rong Li

photo by Steve Gilbert

Left to right: Paul Russell, Joseph Martin, Jerome Kassirer, James Ware, Judith Messerle, Leonard Morse, Bruce Donoff, Geoff Freeman.

Concrete and Champagne

Complementary earplugs were the standard issue at Countway Library on Saturday, March 21. Renovation of the library began that day with concrete drilling for new shelving installation. Just a few days later it was champagne that was given out to celebrate the launch of Countway's extensive renovation, which will redesign and modernize the interior.

On the Quad

Big Women on Campus

There were some BWOC in the Longwood area this spring. Actress Jane Fonda was a featured speaker in March at a Harvard School of Public Health symposium, "America's Children: An Endangered Species?" She volunteers for a project called the Georgia Campaign for Adolescent Pregnancy Prevention. In April Donna Shalala, U.S. Secretary of Health and Human Services, spoke at HMS on quality and consumer protection in health care. And Hillary Rodham Clinton delivered the HMS commencement address on Thursday, June 4 (much more on that in the next issue!).

Times Have Changed

There are now two breastfeeding rooms in the medical area (in Building C and in the 180 Longwood building) where women can express milk or feed their infants in privacy. This is a far cry from the days when there was not even a woman's restroom to be found!

Ellen Barlow

Alumni Council

Spinning a New Web

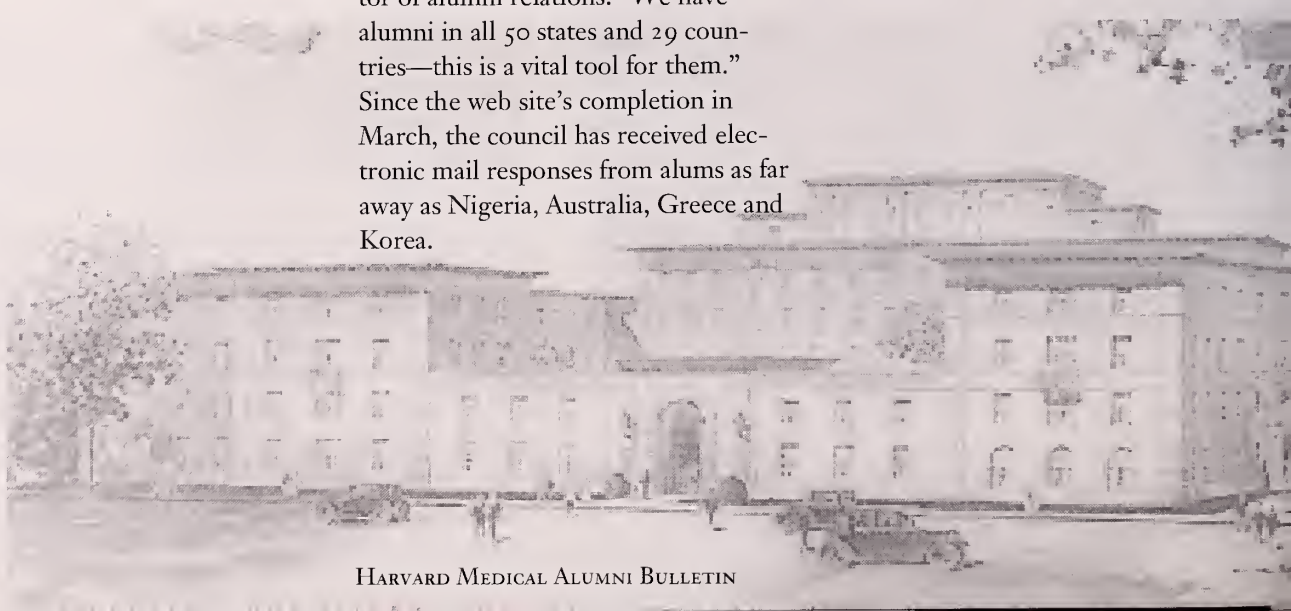
"In 1783, you traveled by barge and horseback to get to Harvard Medical School. In 1891, you could use the Pony Express or the telegram. In 1998, you can just log on to www.hms.harvard.edu/alumni." So said Dean Daniel Federman '53 in his announcement of the Alumni Council's newest means for keeping in touch with HMS graduates: the World Wide Web.

The council's move onto the Internet is representative of the school's thrust to advance its methods for receiving and transmitting information. Their web page captures the alumni association's past, visualizes the story of its progress, and presents some of the major programs and services available to HMS alumni. There is an alumni directory, which is updated weekly, and a variety of growing networking, mentoring and continuing education opportunities. For physicians seeking access to the array of familiar resources at the Countway Library, there's also a link to the Harvard Medical Web.

"The Internet's rapid transmission of complex and dynamic information made it essential for us to expand beyond our regular paper mailings," says Nora Nercessian, executive director of alumni relations. "We have alumni in all 50 states and 29 countries—this is a vital tool for them." Since the web site's completion in March, the council has received electronic mail responses from alums as far away as Nigeria, Australia, Greece and Korea.

Nercessian notes that the web site was created with newcomers to the Internet in mind. "Tapping into the resources here is an easy way to learn how to access information on the Internet in general. I get calls from many other medical associations who want to model their website efforts on what we've created."

She emphasizes that this is a service for the alumni. "It's important to us that they take advantage of it, benefit from it and help us to enrich it too! We're always open to suggestions, and encourage alums to respond to any of the information on the site, or to make requests for new information or opportunities."



Benchmarks

Leptin's Path Traced Through the Brain

by Gabrielle Strobel

In 1995, when leptin was discovered and shown to make fat mice thinner, hopes quickly soared for a pill to treat the nation's pervasive obesity problem. Yet while some clinical trials are already under way, it is becoming clear that no such drug is within reach.

To wary observers of drug development, the leptin story represents another cautionary tale of society's insatiable appetite for quick fixes, soon spoiled by the realization that much more basic research is needed.

But to researchers like Joel Elmquist, assistant professor of neurology at Beth Israel Deaconess Medical Center, leptin has opened up a fascinating area of inquiry. Leptin piqued the curiosity of this neuroanatomist, because though it is made by fat cells throughout the body, it acts on the brain. In the January 20, 1998 *Proceedings of the National Academy of Sciences*, Elmquist, Clifford Saper, the James Jackson Putnam professor of neurology, and Jeffrey Flier, professor of medicine, and others describe some of the complex brain pathways that leptin activates. The researchers are also beginning to connect these pathways to some of the hormone's many effects in an effort to understand how leptin informs the brain about the body's metabolic state and how the brain responds.

"To understand leptin in disease and attempt to treat it, you have to understand the basic way it works. And it is clear that it exerts its major effects through the brain, so this is where you have to look," Elmquist says.

In only three years, researchers have learned that leptin affects almost every neuroendocrine axis—chains of hormonal command originating in the brain—and that it does so by acting on nerve cells in the hypothalamus. This region, deep inside the brain, has far-reaching influence. Through connections with the pituitary gland, the hypothalamus regulates the body's hormonal state, and through connections to the autonomic nervous system, it helps run many body functions without our conscious control: blood pressure, body temperature, biological rhythms, eating behavior, and weight.

Made when energy stores are adequate, leptin decreases appetite while increasing body temperature and energy expenditure. It affects the production of growth hormone and thyroid hormone and influences reproduction. Insufficient leptin is associated with infertility in rodents. Leptin is such a multifarious molecule that ultimately, when researchers understand it better, it may be considered one of the most important hormones we have, says Elmquist.

Previous research had already identified one area in the hypothalamus, the arcuate nucleus, as being involved in leptin function. But Elmquist and his collaborators reasoned that one pathway was not possibly enough to accommodate all the "traffic" that would be generated as leptin exerts its diverse effects.

They started their study by injecting four nanoliters of a tracer dye into an area of rat brains that they suspected of being the main output area for responses to leptin, the paraventricular nucleus of the hypothalamus (PVH, see image). Nerve endings in the PVH took up the dye and transported it back to the cell body. Then the scientists injected the rats with intravenous leptin and tested for the presence of a marker that neurons sensitive to leptin express after exposure to the hormone. Neurons labeled twice, with the tracer and the activity marker, were those that responded to leptin and sent that signal on to the PVH.

Joel Elmquist

photo by Graham Ramsay

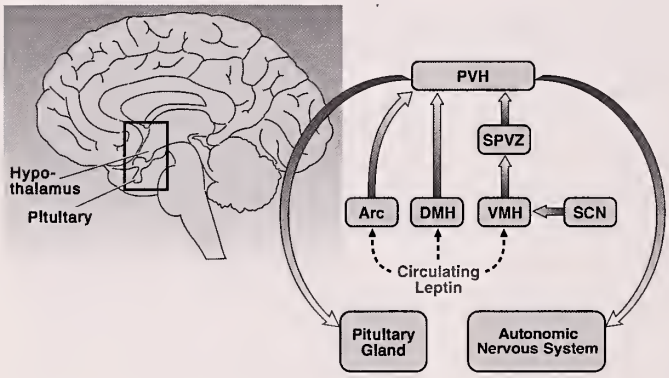
The researchers found two new pathways. Even though receptors for leptin are found spread all over the hypothalamus, suggesting that neurons everywhere in this region somehow participate in leptin biology, neurons from only one area, the dorsomedial hypothalamic nucleus, project directly to the PVH. Elmquist suspects that this connection mediates leptin's effects on the autonomic nervous system, possibly helping to adjust insulin levels and calm the body after a meal, for example.

The researchers suggest that the dorsomedial hypothalamic nucleus serves as a gatekeeper controlling the flow of information to the PVH, like an assistant outside the chief executive's office. The analysis and processing of leptin information, Elmquist suggests, might happen elsewhere, before information flows to the PVH.

The second leptin pathway illustrates that point. Leptin-responsive neurons in another region, the ventromedial hypothalamic nucleus, project to an area called the subparaventricular zone (SPVZ). Serendipity helped Elmquist find this route. The PVH, into which he aimed to inject his dye, is only two hundredths of an inch wide. Occasionally, he missed and squeezed dye into the neighboring SPVZ, visualizing neurons that project there, not to the ventromedial hypothalamic nucleus.

This ventromedial hypothalamic nucleus–SPVZ connection, it turned out, made perfect sense in light of previous findings. The area hosting the circadian pacemaker, which generates daily rhythms based on light, sends most of its nerve output to the SPVZ. Moreover, daily hormone levels are known to rise and fall in rhythmic patterns, which change when eating routines change. Finally, leptin is known to regulate hormone secretion.

Tying all this together, the Harvard researchers suggest that the SPVZ receives nutritional information from leptin-sensitive neurons in the ventro-



Leptin circuits

Leptin Inhibitor May Point Way to Anti-Obesity Drugs

Tantalizing anti-obesity treatments may be one step closer with the discovery of a protein that blocks leptin signaling in the brain. HMS researchers at Beth Israel Deaconess Medical Center report their findings in the March issue of *Molecular Cell*.

Leptin—a hormone produced in fat cells—acts on the hypothalamus to regulate food intake and body weight. Like the multifarious roles of insulin in the pathogenesis of diabetes, the role of leptin is prominent but somewhat mysterious in obesity. Overweight mice with mutations in leptin production or absorption have been studied intensely, but until now, the link between leptin resistance and leptin deficiency remained elusive.

Jeffrey Flier, professor of medicine at BID, and his colleagues at HMS and BID have now identified a protein, SOCS-3, that appears to orchestrate a negative-feedback circuit connecting production or administration of leptin in body tissues to inhibition of signaling via the leptin receptor in the brain.

Following peripheral leptin administration, SOCS-3 increases rapidly in regions of the hypothalamus known to be involved in body weight regulation. It then blocks transduction of the leptin-induced signal by interfering with tyrosine phosphorylation of the leptin receptor. Thus, detection of leptin in the body tissues leads to shut-down of leptin signaling machinery in the brain. Overproduction of SOCS-3 may be the cause of leptin resistance seen in some forms of mouse and human obesity.

"This is a very exciting discovery because if we can develop drugs to limit this leptin inhibitor, they might allow leptin to work better and one day be able to curb obesity," says Flier.

Kristin Weidenbach

medial hypothalamic nucleus and integrates that with circadian information coming from the pacemaker. It then sends its output—possibly orders to change certain hormone levels—to the dorsomedial hypothalamic nucleus gatekeeper, which forwards the message to the PVH for the order to be executed through contacts at the pituitary gland.

This work represents just the beginning of scientists' attempts to unravel leptin's brain connections, says Elmquist. In 1995, Saper wrote that nerve groups involved in autonomic control form an "incestuous web" in which most nerve groups are connected to most other groups.

These days, neuroanatomists try to untangle this web by adding activity markers—such as the gene used in this study—to their usual tracing methods. That way, researchers can visualize only those pathways that are active when the information of interest, in this case leptin, travels through the brain, ignoring the bewildering jumble of all unrelated connections. That approach visualizes major thoroughfares, such as the dorsomedial hypothalamic nucleus–PVH link, as well as smaller side streets where special tasks are processed, such as the ventromedial hypothalamic nucleus–SPVZ link.

Gabrielle Strobel is a science writer in the HMS Office of Public Affairs.

John Schott, M.D.
HMS '66
Investment Advisor

Managed accounts, retirement accounts, family trusts

Dr. Schott provides highly personalized investment management to individuals, families and institutions

His unique approach and established record merit your consideration

Schott Investment Corporation
Publisher of *The Schott Letter*
120 Centre Street
Dover, MA 02030
(508) 785-9996

Registered Investment Advisor SEC and Commonwealth of Massachusetts

Molecule Linked to Regulation of Body Temperature, Weight

In the March 20 issue of *Cell*, scientists at the Dana-Farber Cancer Institute described a new molecule with key roles in the regulation of body temperature and defense against obesity. The protein, PGC-1, switches on transcription factors and other nuclear receptors that regulate adaptive thermogenesis—release of stored energy as heat.

Adaptive thermogenesis is a specialty of brown fat and skeletal muscle cells that release heat energy in response to cold or overfeeding. Energy is dissipated via changes in the number or function of mitochondria, the powerhouses of eukaryotic cells. Many of the genes at work in adaptive thermogenesis have been uncovered, but very little is known about how the process is regulated.

Bruce Spiegelman, professor of cell biology at DFCI, and his colleagues cloned PGC-1 from mouse brown fat. They found that it increased dramatically when mice were exposed to cold, or when cultured brown fat cells were treated with hormones known as ß-adrenergic agents that play a role in thermogenesis. Upregulation of PGC-1 subsequently stimulated expression of nuclear hormone receptors involved in the differentiation of brown fat cells, particularly the thyroid hormone receptor and PPAR-γ.

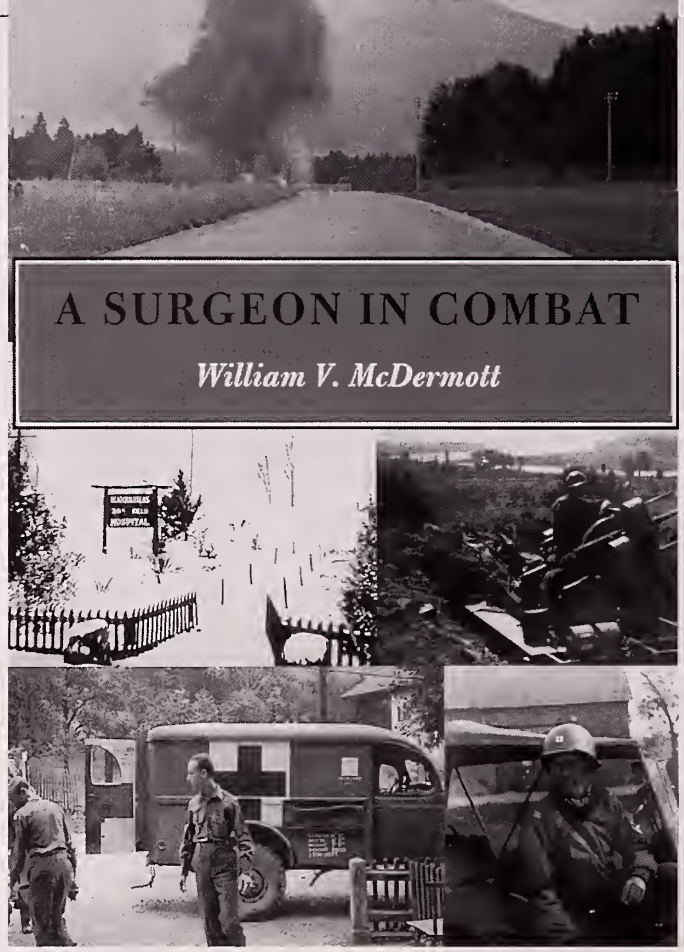
Based on the tissues where it is expressed and its ability to activate the thyroid hormone receptor, PGC-1 may be a useful therapeutic target to combat the abnormally low respiration rates characteristic of hypothyroidism. Regulation of PGC-1 may also provide new opportunities to manipulate energy expenditure in vivo and treat energy homeostasis disorders such as obesity and obesity-linked diabetes.

Kristin Weidenbach

Book Mark

A Surgeon in Combat
by William V. McDermott '42
William L. Bauhan, Publisher, 1998

by J. Gordon Scannell



King Henry V had it right when he exhorted his Happy Few at Agincourt:

Old men forget: yet all shall be forgot,
But he'll remember with advantages,
What feats he did that day . . .
This story shall the good man teach his son;
And Crispin Crispian shall ne'er go by,
From this day to the ending of the world,
But we in it shall be remembered . . .

Well, Bill McDermott didn't quite make it to Agincourt, but he did reach nearby Omaha Beach on D Day + 1 and can tell a good story to his son and others who will listen. His book, *A Surgeon in Combat* is a remarkably readable bit of editing of some 700 war letters to his recent bride, a chronicle of two years overseas in the European Theatre of World War II.

The story began at Harvard Medical School in the spring of 1941, technically at peace but with Pearl Harbor just over the horizon, and both armed services shy of doctors. Without a doctor draft many ingenious plans were needed to bring in medical students and men in residency training as a backlog of reserve medical officers. Thus our protagonist, William McDermott, a senior medical student of the Class of 1942, found himself signed on as second lieutenant in the Medical Administrative Corps.

The *quid* was early graduation from medical school (a degree was needed to qualify as a doctor in the Medical Corps) and a year of accelerated surgical residency training at the Massachusetts General Hospital. The *quo* was that he would be ready to proceed to Camp Edwards and the 574th AAA-AW Battalion—later the 550th AAA-AW—a mobil, armored, half-track unit that carried multiple machine gun mounts to provide air cover for infantry armored divisions in exposed positions, e.g., river crossings. McDermott's scenario included his marriage to Blanche and another three months basic training at Camp Edwards before his Iliad was ready to begin.

His transport, a Cuban-American cruise ship, the *Borinquen*, was comfortably crowded and part of a large convoy of 40,000 troops which sailed from Boston on October 23, 1943. The destination was not announced but almost certainly Britain. They were escorted by twelve destroyers and the venerable battleship *Texas*, because German submarines had recently taken to deadly "Wolf Pack" attacks and the blockade of Britain was still a major threat. Twelve days after leaving Boston they landed at Swansea and immediately boarded trains for Liverpool.

Operation Overlord was seven months and a long and crowded road away. Fortunately for the reader McDermott's narrative account is lively and quick, liberally spiced with comments by the likes of Noel Coward and Oscar Wilde, as his battalion is ordered from Dorset to Cornwall, back to the Salisbury plain for pre-invasion maneuvers, then to East Anglia, which provided ready access to London and its sybaritic charms and other off-limit attractions, e.g., observing "Piccadilly Commandos."

Behind the enjoyable diversions of the English countryside and its people, and the chance to grouse about the weather, the preparation was in deadly earnest. During invasion training, all units were rated by seasoned observers. The battalion of McD (as he was

known) was ranked second to a similar battalion in their division. A disappointment at first, until it turned out that most of the casualties were in that first unit that preceded them to Omaha Beach on D-Day. They went ashore on D+1 when the beach-head was stabilized and casualties were, at first, slight. But in the course of the next few weeks rugged fighting followed among the hedge rows, the bocage, and at the base of the Cotentin peninsula.

There was the capture of Cherbourg, the drive for Avranches and its capture by Patton, and finally the breakout and race across France, to temporary stalemate, in the old fought-over battlefields near Verdun and the southern end of the Siegfried line. There was a long way to go but McDermott's narrative description stands up very well, keeping repetition to a reasonable level, creating a sense of immediacy, and preventing an infantry campaign from becoming pedestrian.

The German drive through the Ardennes, the Battle of the Bulge, and Lamar Soutter's remarkable flight into encircled Bastogne all receive proper attention. Then came a major change in McD's life. Transferred to the 30th Field Hospital he was heavily engaged in Patton's attack on the southern end of the Siegfried Line and the crossing of the Rhine. For McDermott, with only one year of accelerated surgical training to his credit there was a lot of hands-on training as he advanced from a first aid function to become part of the Fourth Auxiliary Surgical group dealing with major surgical procedures—chiefly abdominal and thoracic—close to the action and the time of wounding. McD was fortunate in being attached to a very able senior surgeon and service with the very active 5th Infantry and Armored Divisions, spearheads of Patton's Third Army, as they plowed through the Siegfried line, the Saar, the Rhineland and the Palatinate.

After their loss at the Bulge, the German army fought stubbornly but eventually morale disintegrated, even among the inhuman killers of the SS. The millions of displaced and homeless Europeans, and the devastation of their villages, towns, and cities were sobering realities which accompanied the celebrations of military victor. And then there was the matter of the death camps.

In the late chapters of *Surgeon in Combat* there is a thought-provoking snapshot of McD (now a captain according to his helmet insignia) captioned "Department of Shattered Illusions: WVMcD the day after V-E Day, on the way to Ebenesee." Ebensee was a death camp northeast of Salzburg. It was largely political and military rather than part of the Final Solution; the ethical and practical patterns were pretty much the same without the racial-religious overtones. These were work camps you were not expected to survive.

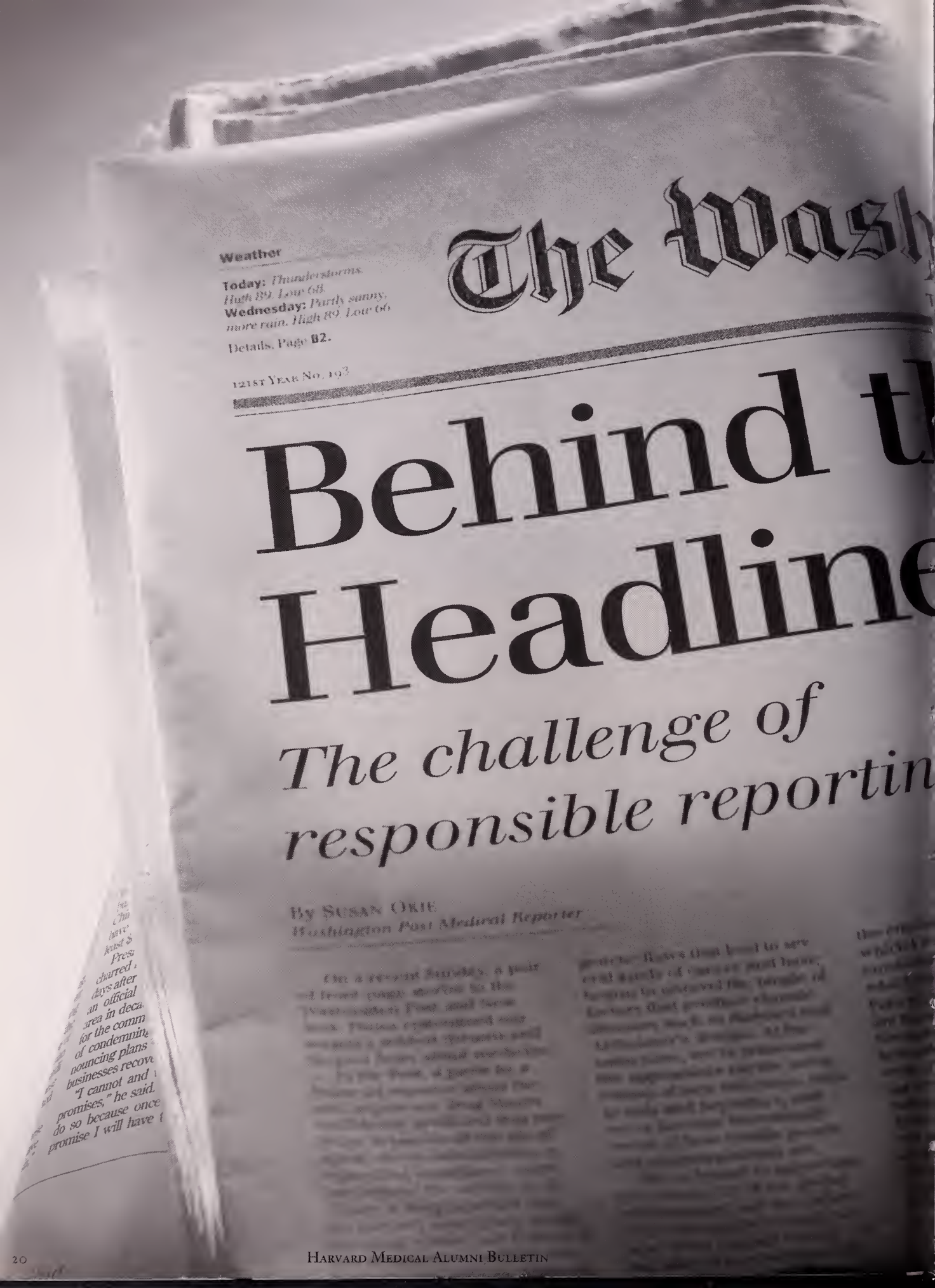
McD wrote home: "When I walked into one of the frightfully crowded barracks on the first night, there were three pitifully weak cheers for the American Army. A few who were apparently ex-soldiers struggled to their feet in an attempt to salute and someone tried to sing 'Over There.' I thanked them as well as I could and fled precipitously before I broke down completely."

There was an enormous amount of dreadful cleaning up to do at Ebensee: signature piles of skeletal bodies roughly stacked like cord wood and gaunt survivors emaciated beyond the limits of one's imagination. Fortunately for the 30th Field Hospital it was relieved within a few days by a large evacuation hospital better suited than they were for taking care of large numbers of "medical" patients.

The time from V-E Day on May 7 to 9, to V-J Day August 10—four days after Hiroshima—was confusing and frustrating not only because of the displaced masses of homeless, but also for the uncertainty of the military situation with respect to Japan and the possibility of redeploying troops to the Pacific. The 30th Field Hospital found itself in Bavaria slowly coming apart as individuals left for home: but until Japan surrendered, the unpleasant prospect of island invasions and destruction of the Empire remained.

McD was faced with the likelihood of commanding a Mobile Surgical Field Hospital, an inviting prospect in some ways but not the equal of going home. That took some months, a great deal of negotiating, and finally passage on the *Cape Flattery*: a 1,600-ton motorship carrying 1,000 men. One of its two engines gave out after passing through the Straits of Gibraltar as it headed into a major Atlantic storm that also damaged the *Queen Mary*. As fate would have it, the *Cape Flattery* reached New York on early Christmas morning in time to sail past the Statue of Liberty with the entire contingent of troops lining the rails—cheering, laughing and crying.

J. Gordon Scannell '40 is MGH clinical professor of surgery emeritus, former editor of HMAB, *and a member of its editorial board.*



Weather

Today: *Thunderstorms. High 89. Low 68.*
Wednesday: *Partly sunny, more rain. High 89. Low 66.*

Details, Page **B2.**

121ST YEAR No. 192

The Wash

Behind t Headline

The challenge of responsible reportin

By SUSAN OKIE
Washington Post Medical Reporter

photo by Stuart Darsch

by Susan M. Okie

On a recent Sunday, a pair of front-page stories in the *Washington Post* and *New York Times* epitomized our society's wildest dreams and deepest fears about medicine.

In the *Post*, a piece by a financial reporter about the anti-impotence drug Viagra confidently predicted that new drugs to banish all the ills of aging—from osteoarthritis to expanding waistlines—were just around the corner. In the *Times*, a story reported that the nation's emergency health planning system had flunked a test designed to evaluate how it would deal with an outbreak of illness caused by biological terrorists. It left readers with the impression that any decent virologist would have no difficulty altering the genes of the smallpox virus to produce a brand new disease.

In different ways, both stories are good examples of our inflated expectations about what doctors and research scientists can do. In the last couple of decades, our understanding of the human genome and of the molecular mechanisms of many disorders has expanded enormously. We've identified genetic flaws that lead to several kinds of cancer and have begun to unravel the tangle of factors that produce chronic illnesses such as diabetes and Alzheimer's disease. At the same time, we've witnessed the appearance (or the recognition) of new infections, such as AIDS and hepatitis C, and we've become increasingly aware of how mobile people and microorganisms are.

We've begun to appreciate the complexity of the global environment and the unforeseen consequences that

can arise from human activity: rising rates of environmentally-related illness in the former Soviet Union, region-wide air pollution from forest fires in Southeast Asia, fish deaths and human illness from Pfiesteria blooms related to agricultural runoff in the Chesapeake Bay.

As our knowledge grows, so do our hopes and fears. Science and scientists begin to seem omnipotent. We expect them to cure cancer and prolong our lives, but we also fear they'll use their power dangerously, with results that we can't foresee. Hence the terror a cloned lamb named Dolly can evoke.

As a science reporter, this is the emotional environment in which I work. It's also the emotional background against which doctors must practice. Patients expect miracles; readers hope for news of "breakthroughs," a word I have learned never to use. When we write about potentially promising treatments, especially for diseases like cancer, Alzheimer's or AIDS, emotions run so high that it's perilously easy for a story to raise false or premature hopes, as the recent controversy over the reporting of Judah Folkman's work on blood-vessel blocking drugs makes clear. At the same time, patients—and the general public—mistrust the power that doctors wield and fear that scientists' activities may have dangerous and unpredictable consequences.

Because both doctors and science writers have to cope with these perceptions, and because they share an important goal (educating consumers about science), they could achieve a great deal by cooperating. But often they're at odds. Medicine and journalism are very different cultures. Doctors practicing today are hemmed in by limits—limits on how long they can spend with a patient, on what tests they can order, on when they can consult a specialist.

Yet, their patients expect them to keep up with the latest changes in treatment and to be able to explain the implications of new discoveries, such as the recent one that tamoxifen can reduce the risk of breast cancer. It's no wonder that many physicians clench their teeth when a patient pulls out a newspaper clipping and asks, "What do you think about this?"

We expect them to cure cancer and prolong our lives, but we also fear they'll use their power dangerously.

If journalists sometimes make doctors' lives harder, part of the reason is that education isn't our only task. We have to report the news, which can mean trying to make sense of a highly technical story within a few hours, using whatever information is available. We are professional skeptics, paid to examine the motives of the purveyors of news—whether they're government officials, businessmen, doctors or scientists.

We also have to try to stay ahead of our competition. We have to grab the attention of readers—and editors who make room for science stories—which means competing with political scandals, crimes and sports events. And while doing all this, we have to try to discern the interests of readers in our community. That often means trying to decide whether it's more important to cover a new AIDS drug or a breast cancer lobbying campaign, whether to write about the latest laser treatment for coronary disease or about an untested herbal remedy for depression that everybody's trying.

When I started working as a medical reporter 23 years ago, I felt a lot more in control. I came to the *Washington Post* as a summer intern, fresh from my first year at Harvard Medical School. At the newspaper that had taken the lead in reporting the Watergate scandal, science stories were understandably a low priority. A single editor was responsible for all topics subsumed under the acronym SMERSH, which stood for "Science, Medicine, Education, Religion and all that S--T."

Except for Larry Altman at the *New York Times*, there were no science journalists with medical degrees. The three reporters covering science at the *Post* had all started as political or general-assignment writers. They taught me how to tighten up my prose and how to write on deadline, but they didn't have to teach me how to come up with medical news. Even a year of medical school had given me some valuable background and plenty of ideas.

But it wasn't until my second summer at the *Post* that I got a taste of a big, breaking medical story. That year, 1976, dozens of Pennsylvania men developed rapidly progressive pneumonia after attending an American Legion convention in Philadelphia. No one knew the cause. Epidemiologists from the Centers for Disease Control were dispatched to track cases and collect specimens from patients who had what came to be known as Legionnaires' disease.

I was sent to Harrisburg with Stuart Auerbach of the *Post* to cover the mysterious outbreak. I attended a funeral in a small Pennsylvania town. Knees trembling, I knocked on the door of the bereaved mother and was invited in. Stu and I dictated our stories on deadline from telephone booths. Our articles led the paper. I was hooked.

It took several more years, during which I bounced back and forth between the *Post* and my family practice residency, before I decided on a career as a medical journalist. I liked the same things about both jobs: the

surprising interactions with total strangers, the variety, the challenge of constantly having to learn something new.

In the end, I became a reporter because I was good at it. I loved writing, and I loved the intellectual freedom. Writing for the *Post* has given me a license to explore any corner of medicine that interests me, and a wonderful opportunity to have what one of my bosses calls a "conversation" with readers about science and their bodies.

But for someone trained as a doctor, the role of observer can be frustrating. When the AIDS epidemic began, I often felt guilty to be writing about it instead of treating patients or studying risk factors. I felt that way again during three years in Kenya, where I wrote stories about AIDS, family planning, and the environment while my husband did malaria research. In a country where doctors are in such demand, no one could understand why a doctor would work as a reporter. Even here, people are always asking me, "Don't you feel that you've wasted your training by not practicing?"

These days, the answer is no. The job has gotten harder, and my scientific and medical training is increasingly valuable. Science stories have become big news, and many more reporters now have scientific or medical backgrounds. At the *Post*, there are now eleven reporters assigned to cover different aspects of medicine, biotechnology and health care, including another physician, a lawyer, and two people with backgrounds in biomedical research. But the issues have also become more complex.

There's also far more jockeying for media attention by institutions, advocacy groups and companies, and more sophisticated efforts to "spin" the news. I'm besieged with "news tips" and purportedly urgent press release that arrive by telephone, fax, e-mail and "snail mail"—dozens of calls and faxes a day and two or three cartons of mail a week. Like some fancy winnowing machine, my job is to sift through all this material and identify the news that belongs in the *Washington Post* while simultaneously reporting and writing stories.

When the AIDS epidemic began, I often felt guilty to be writing about it instead of treating patients.

Primary care physicians are today's gatekeepers for medical services; journalists are the gatekeepers who decide what people will hear, see and read. Medical and scientific institutions have begun to recognize this. Some public health schools teach their students (future health officials) how to seek media coverage and how to behave when they're being interviewed by a reporter. I've participated in seminars to teach epidemiologists at the CDC how to deal with journalists. The American Association for the Advancement of Science offers a popular summer internship program that places science graduate students at newspapers, magazines and television stations; a high percentage of the interns go on to become science journalists.

Any reporter is dependent on the quality of the information he or she is able to gather. For me, perhaps the biggest frustration of the job comes when health professionals don't seem to take seriously the responsibility of educating medical consumers. I felt that way during the recent flap over mammography guidelines for women in their 40s, when radiologists, cancer doctors and epidemiologists squabbled over the relative benefits of the test and failed to come up with any advice that made sense to women and their doctors. The same thing happened when I covered the recent news about tamoxifen preventing breast cancer: health officials hailed a new era of chemoprophylaxis, but didn't specify how the results of the study could be used to define the group of women whose risk of breast cancer was high enough to make taking tamoxifen worthwhile.

We know far too little about the best way to translate scientific advances into practical information. Scientific literacy is declining even as the issues grow more complex. The AIDS epidemic drove home the need to find effective ways of imparting life-or-death information, and research began to identify the most effective media and messages for reaching teenagers, drug addicts, and members of minority groups.

Now we need to learn more about how to communicate effectively about other diseases, and other scientific issues, to a wider audience. Reporters, educators, physicians and public health officials should all be part of this effort. If we don't address the problem, the gap between the "experts" and everybody else will only widen.

Susan M. Okie '78 is a medical reporter for the Washington Post. *She is the author, with Sally Ride, of a children's book,* To Space and Back, *and of prize-winning articles on medicine and health care.*

photo by Molly Lynch, ABC

The Doctor in the House

by Elissa Ely

Dr. Timothy Johnson, health editor for "ABC News," "Good Morning America," "20/20" and "Nightline," works in an inauspicious office building with lawyers, architects, the AAA and the Massachusetts Golf Association. Peter Jennings in shirtsleeves hangs on the wall of the reception area in the ABC suite. Next to him, above the circular couch, the dark eye of an inlaid television gazes out.

Dr. Tim, as he is known on television, sits in an office filled with books: *Grant's Anatomy, World Atlas of Geography, Healing Anxiety with Herbs.* A medallion from the Surgeon General is framed and tilting on a wall. The clock is set to 3:30 although it is actually 10 AM. Half a dozen ceramic mugs are in various states of fluid use. A dressing-table mirror is propped against a window.

With his tie loosened, he speaks to me in that trustworthy voice for which he is famous. He graduated from Albany Medical College, and has an MPH from HSPH. In 1971 he was working as Director of Emergency Services in Lynn, Massachusetts, and teaching at MGH, when he was invited by a physician-friend to host a local public service talk show on medicine. He continued in clinical practice until 1984, when he joined ABC full time.

EE: *The one thing human beings are always interested in is their bodies. Wars come and go, but cholesterol, that's eternal. Our bodies are the ultimate objects of self-interest. Yet the same audience that's so interested in spectacular findings is also easily bored—the ear hears in three-minute sound bites. It seems like one of the hazards of medicine in the media is trying to teach an audience that's eager to listen yet not always interested in what's actually important.*

TJ: There are a lot of hazards, though I'm not sure there are more than for the typical physician's 15-minute visit, which is often spent cramming in information and answering a lot of questions. The key is not to try to do something that can't be done reasonably well in the time period you have. On "20/20," I can have 10, 12, 14 minutes to present a lot, especially because I have much more time beforehand to craft and edit the information. But the truth is, we don't know what we accomplish when we're operating in the media. We haven't studied what we do in any kind of scientific way.

EE: *When I went to medical school, one of my mentors told me that by the time you're out of school ten years, 50 percent of the information you've learned will be obsolete.*

TJ: The problem is, you don't know which 50 percent . . . .

EE: *The audience doesn't know either. Since you began reporting, 50 percent of the information is no longer accurate. Somehow this changeability needs to be conveyed to an audience, and grains of salt thrown in. How do you do that?*

TJ: You don't do it in any continuous didactic fashion. You don't continually beat people over the head. We update information and remind people that

the data we're reporting from the latest study may well change in the next study. The public is slowly getting used to that idea. It bothers them in some ways, and yet in other ways it teaches them about the nature of science, which is that it's really only as good as the latest study and the latest data.

EE: Any correlation between media educating about medicine and doctors tumbling from their pedestals?

TJ: That's certainly one of the sociological changes that surrounds this phenomena. The audience no longer relies on just one official viewpoint. This is helpful because it allows the medical consumer, meaning all of us, to make better choices. The downside is that it's more confusing. There was something to be said for the patient having total faith in one physician who told them what to do.

EE: The ultimate parent.

TJ: Exactly. There's a price to pay for this freeflow of information. But on balance I believe that it's healthy.

EE: It must be hard to convey information without an opinion.

TJ: When ABC asked me to join in 1984, I said I'm not interested in being a reporter. I always felt like a physician who happens to be on television, rather than a television person who happens to be a physician. I've had the luxury of being able to pick and choose what I do and when I do it, and I tend to pick opportunities where I can go beyond reporting the facts into illuminating and commentating. I have a sentence in my very small contract that says, in essence, I don't have to do what I don't want to do.

EE: So how do you choose what you want to do?

TJ: I wish I could tell you the science of the daily plan. It happens in all kinds of ways. Some is obviously because of the news of the day. About half of it happens that way. The other half are long-term reports we plan and execute over several months. You multiply that by 14 years and you have the opportunity to cover a lot of material.

EE: More than once.

TJ: Oh yes.

EE: This is unfair, but is there a story you've covered more than once that has particularly moved or amazed you?

TJ: You use the word moved. I remember hosting a "Nightline" on which the guest was a woman who had contracted AIDS from her husband and was dying of it. She was on the program with her children, trying to make arrangements for who would take care of them when she died. I was so moved by what she was doing that I almost broke down on live television. She was able to place them with relatives, get them all assigned before she died. She was able to nest them out. But can you imagine sitting there on live TV making plans for all your children?

EE: Do you know what happened to them?

TJ: I don't.

EE: That's the difference between the media medicine that you practice now and the medicine you used to practice, where you had continuity of contact and knew the ends of the stories.

TJ: Absolutely. There are pros and cons to every professional activity. That's one of the downsides, yes. I long ago learned there's no perfect job.

EE: More and more people are going into media for complicated reasons: noble reasons, heroic reasons, glamorous reasons. It has occurred to me that, just like doctors need to take a Hippocratic oath, maybe there ought to be some kind of ethical oath for the medical media?

TJ: One suggestion of mine that will surely cause consternation to many journalists is that medical journalism is different enough from general journalism—it requires specific knowledge of statistics and epidemiology—that maybe these journalists need to undergo some kind of training and "credentialing" that identifies them as competent. We expect our weathermen to be meteriorologists. Shouldn't we expect our medical reporters to have credentials too?

EE: What's amazing is that the suggestion would be controversial.

TJ: I think it would go a long way towards solving some of the so-called ethical questions that come up—that is, making sure people understand what they're reporting and know the pitfalls. Beyond that, the ethical issues, to me, boil down to scrupulously avoiding any conflict of interest financially or otherwise. I have assiduously avoided any kind of financial interest with any medical enterprise I might someday have to report on.

EE: Do you get a lot of phone calls at home, because people feel they know you?

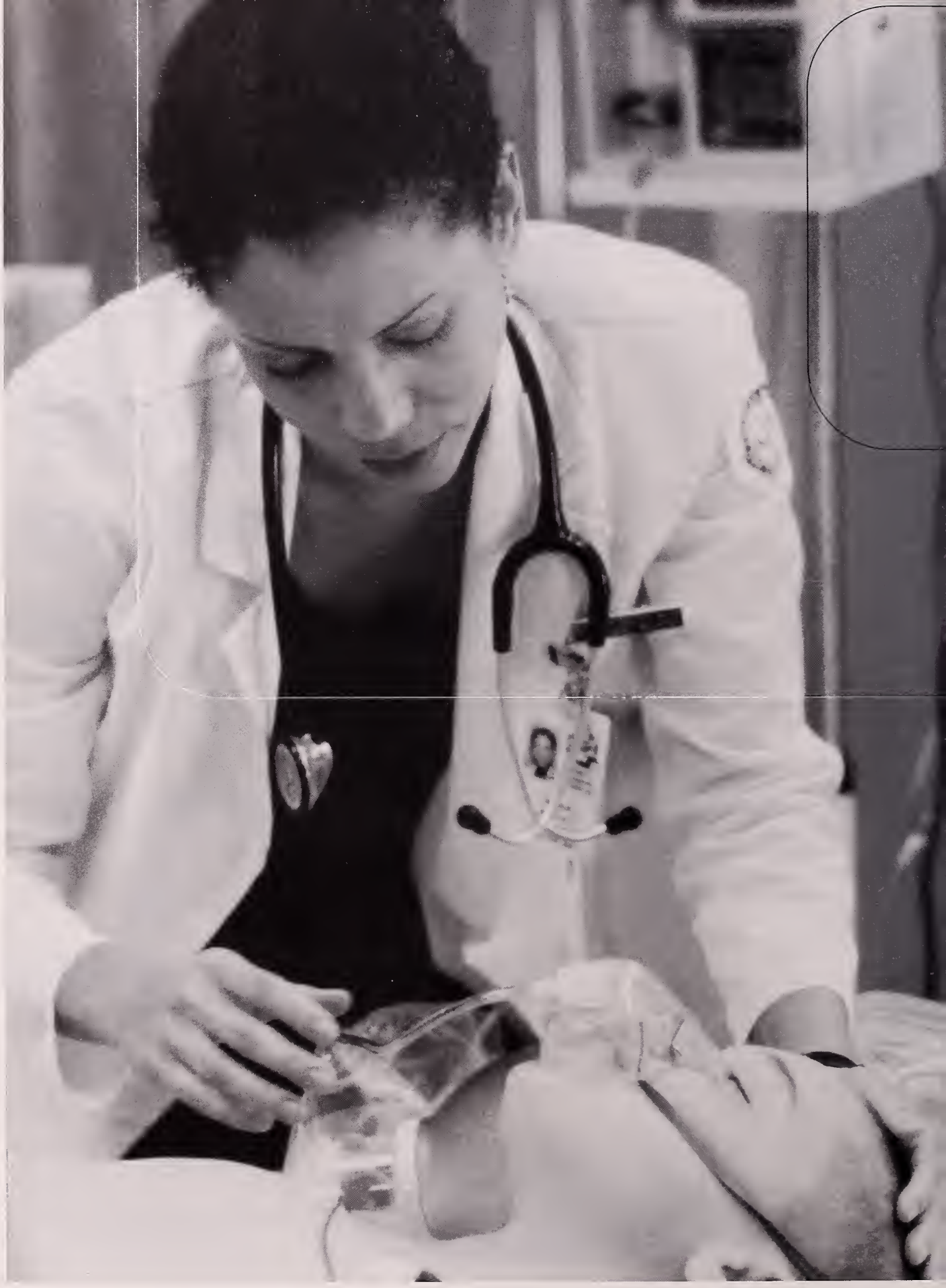
TJ: I do, mostly from friends of friends, or friends of family. Not very often from strangers. They call the office more than home. We try to help when we can. It's gratifying.

EE: You know what you do for people, but you don't always know what you mean to people.

TJ: I've had a great opportunity to learn, to be stimulated personally, and to help people most of the time. What more can you ask?

EE: Only for health.

Elissa Ely '87 is a practicing psychiatrist, a commentator for National Public Radio, and a contributor to the op-ed page of the Boston Globe.



Truth in Television

by Neal Baer

THE DOORS CRASH OPEN. SEVERAL flinty paramedics race down the hallway, wheeling in a critically ill patient with a gunshot wound to the chest, who's just coded in the ambulance. A team of crackerjack emergency medicine attendings, residents, medical students, and nurses transfer the patient from the gurney, amidst a tangle of monitors and IVs, to a trauma-room table as Mark Greene, the doctor in charge, yells out to the paramedics: "Give me the bullet."

That scene plays out daily in emergency departments across the country and every Thursday night as well on NBC's "ER," the most popular dramatic show on television. Why "ER" has captured the minds (and hearts) of a wide-range of viewers is open to speculation. Why does any one show or movie become a hit or a failure? Certainly a lot has to do with a confluence of factors that just seem to work—an appealing cast, a fresh setting, compelling stories—but I think there's more. "ER" has managed to tell medical stories that reveal the personalities of the doctors and nurses in contrast to traditional medical shows, which told stories about guest-star patients.

On "ER" we learn about the characters from the way they practice medicine. We discover that Carter (played by Noah Wyle), who started as a third-year medical student and is now a second-year resident in emergency medicine, is torn between spending time getting to know a patient and feeling that he must see as many cases as possible in order to learn as much as he can (a problem I and many of my friends encountered as third-year medical students and still tangle with as residents). Ross (George Clooney), a pediatric fellow in emergency medicine, often puts the patient's immediate needs ahead of complicated legal issues, as he recently did when he detoxified an infant addicted to opiates without getting consent from the child's heroin-addicted mother. Ross's approach to this patient is very different from that of Carter's or Greene's, and by watching the show (we hope) the viewer will come to know the complicated people who work at Chicago's County General.

Perhaps another part of the appeal of the show is the inherently dramatic nature of the workplace; put simply, where else are life and death decisions made so frequently and commonly? (Yes, "ER's" emergency department may have more than its share of trauma, but it is, after all, dramatic television.) Moreover, "ER" is steeped in the culture of medicine; it rings true, as if a real doctor were giving you an insider's tour, which I believe is part of the show's appeal: the audience is privy to a world to which they've never previously had entry. Carter practices suturing on a pig's foot (as I did during my core surgery rotation at the Deaconess); Carter and Deb, another medical student, race each other as they suture a gaping wound on a patient's chest, Carter taking the left side, Deb the right (just as a friend of mine told me she did at Mass. General).

"ER" is liberally sprinkled with the lingo and lore of medicine, which cannot be dreamed up. The authenticity comes out of both my medical training and experiences as a resident as well as from the experiences of many doctors, nurses, and medical students interviewed by the "ER" staff. I've also been fortunate to call on two colleagues from Harvard Medical School, Amber Barnato '12 and David Foster '95, who have worked with us at "ER" to develop stories.

I began writing for "ER" when the show first aired in 1994. I had completed my third year at HMS and, with only several day's notice, went out to Los Angeles to "break stories"—in other words, to share the dirt with the other writers about what it is really

like to be a medical student. I had written for television before coming to Harvard ("China Beach," an "ABC Afterschool Special"), and had planned not to return to "the business." So much for plans. "ER's" executive producer, John Wells, sent me a copy of the pilot by Michael Crichton '69, which drew extensively on his experiences as a medical student at Harvard, and I was captivated by its veracity in depicting the relationships among attendings, residents, medical students and nurses at a busy urban hospital.

Ultimately I completed clinical rotations at a family clinic on weekends and was back at HMS during breaks when the show was on hiatus (graduating in 1996, one year after my entering Class of '91). Now, at the beginning of our fifth season, I am doing an internship in pediatrics at Children's Hospital of Los Angeles during three-month breaks in our schedule. People are often baffled by my desire to practice medicine, perhaps because they have a highly glamorized image of what it's like to write for television. I consider myself extremely privileged to be able to write about fictional patients and to take care of real ones at Children's Hospital.

Behind the Scenes

Though "ER" is a dramatic television show, we strive to make the medicine accurate. Television has been taken to task by researchers (*New England Journal of Medicine*, June 13, 1996) for inflating the success rates for cardiopulmonary resuscitation (CPR) by showing too many positive outcomes, thus confusing the audience about CPR's efficacy. (I wrote a rebuttal to that study in the same issue. Just one of the methodological flaws skewing the results was the inclusion of "Rescue 911," which always has positive outcomes.) And recently *Time* published an article criticizing our depiction of ultrarapid detoxification of an infant, claiming that the episode raised false expectations among adult addicts and distorted the public's perception of addiction treatment options.

We spend hours on each show, verifying the medicine and talking to experts in the field. I often turn to doctors I met at Harvard for help. Robert Novelline, a radiologist at Mass. General, provides us with up-to-the-minute advice about advances in radiology. Harvey Makadon, an internist at Beth Israel, provides much of the medical expertise for the character of Jeanie Boulet (played by Gloria Reuben), who is HIV positive. As new treatment protocols arise, Dr. Makadon informs me about how they might affect the care of someone like Jeanie. I'll never forget when I spoke to him about the character's treatment regimen, and he thought carefully about which protease inhibitor he would prescribe for Jeanie—as if she really were his patient.

In addition to my contribution as a writer and supervising producer for "ER," there is another doctor who writes for the show, and two emergency physicians provide technical guidance. These emergency physicians work on the set, ensuring that procedures appear to be performed realistically, that equipment is used accurately, and that terminology is used and pronounced correctly.

We go to such lengths because we take our responsibility to the public seriously. A recent survey sponsored by the Kaiser Family Foundation and conducted by Princeton Survey Research found that 53 percent of regular viewers of "ER" (which averages between 25 and 30 million viewers each week) said they learn important health care issues from "ER"; 32 percent said they get infomation from "ER" that helps them make choices about their own or their family's health care. That so many viewers turn to our show for entertainment and information raises challenging questions about television's role in educating the public about health and medicine.

Entertainment or Education?

I'm often asked whether "ER" is entertainment or education, which underscores the assumption that the show can only be one or the other. Many TV writers take the position that dramatic programming is entertainment and as such should not be viewed as documentary or news. The boundaries between what constitutes nonfictional television and fiction have increasingly become blurred, however. Viewers see real people (actors) made to act, look, and speak like doctors.

As the Kaiser Family Foundation survey points out, viewers take the medical information presented seriously. In some cases they use that information to make important health decisions: the Kaiser survey also found that 12 percent of viewers said they have actually taken the initiative to contact their doctors about an issue because of something they saw on "ER."

Instead of dichotomizing the question of whether or not "ER" is entertainment or education, I prefer to think of it as both. By telling compelling stories, I hope that we are able to capture the viewers' imagination and intellect.

For instance, I wrote an episode in which a teenager with end-stage cystic fibrosis demanded to make his own decision about placing a DNR (do not resuscitate) order in his chart. The legal and ethical ramifications of giving minors the right to decide the course of their treatment is open to debate. We strive to dramatize those debates, to make them real to the audience, by telling stories about characters who face these dilemmas. Perhaps I'm drawn to medicine and dramatic writing because fundamentally both are about storytelling: every patient has a story that must be carefully listened to, a story often cloaked in an unspoken subtext that bears critical clues to understanding the mystery of the ailment.

On "ER" we do not shy away from telling stories without easy answers—the kinds of patient stories we as doctors face almost daily. How can we provide better care to the uninsured? What is our role in treating a pregnant

woman who puts her fetus at risk by abusing drugs or alcohol? Is it ever ethically acceptable to break confidentiality in treating a patient with HIV or in treating a pregnant teenager? These questions go to the heart of social, political, and cultural debates facing us today and we feel fortunate to be able to dramatize and present these issues in all their messy and contradictory guises.

Can Television Teach?

Some television writers hide behind a mask of ignorance when writing about health care issues or medicine, claiming that what they write is strictly "entertainment," abdicating responsibility for the messages intertwined in their stories. Part of that rationale comes from the fact that research on the relationship between what one sees on television and how one later acts is murky at best.

Through another Kaiser Family Foundation survey (under the auspices of Princeton Survey Research), we wanted to see whether a viewer can in fact learn health information from a dramatic television show. A randomized sample of viewers was pretested about their knowledge of emergency contraceptive pills (ECPS) before an episode of "ER" aired, in which a young woman who was date raped comes to the emergency department for treatment. Nurse Hathaway (Julianna Margulies) offered ECPS (a high dose of birth control pills) and explained to the patient how to take them. Following the episode the same test was administered, yielding a startling finding: the number of viewers who knew that a woman has options for preventing pregnancy after unprotected intercourse increased from 50 percent to 67 percent after the episode. And of those who knew there are options, the number who specified that she could take ECPS (the method shown on "ER") jumped from 10 percent to 33 percent.

We found these results impressive and sobering. That a three-minute segment of one episode could have such an impact has led us to initiate other projects to increase public awareness about a wide-range of health topics.

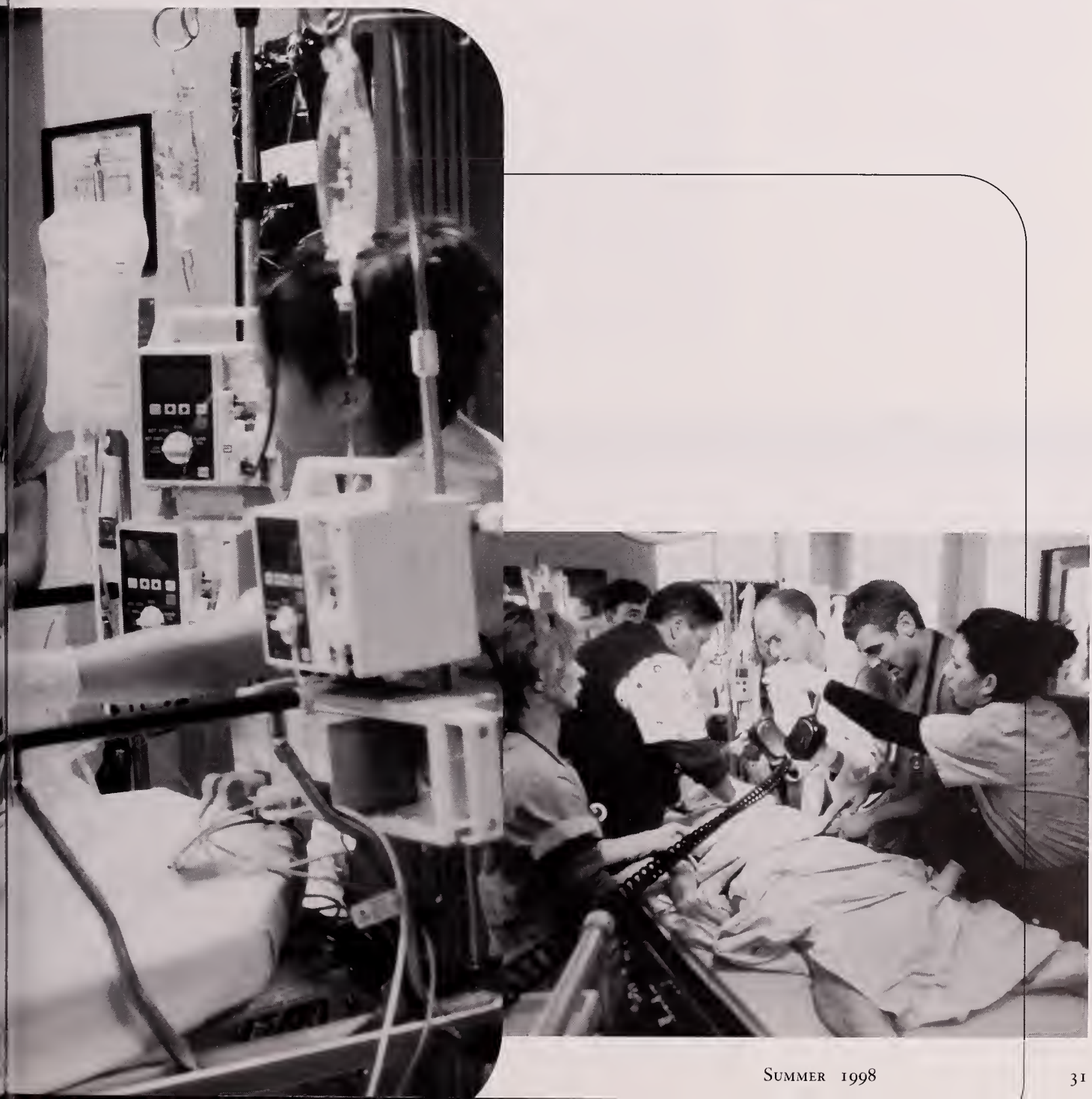
I initiated a project, "Following 'ER'," with the School of Public Health and Hygiene at Johns Hopkins. They produce (along with a local NBC affiliate) a short two-minute news segment each week that airs after "ER" is broadcast and uses one of the "ER" storylines to illustrate an important pubic health topic. For example, an episode of "ER" showed a pregnant woman being treated for chlamydia, and the physician assistant, Jeanie Boulet, discussed with the woman her increased risk of contracting HIV because of her chlamydia infection. That important information was then placed in a short news segment on the link between chlamydia infection and susceptibility to HIV, which was then offered to all NBC news

affiliates to air that same night on their local late-night news.

Because we present so many different medical stories each week, we are able to find at least one that has some public health implication, which in turn becomes the topic for "Following 'ER'" (repeats of episodes allow us to present new issues or to reiterate those previously presented). We also try to stay abreast of important medical developments by speaking to the American Academy of Pediatrics, Advocates for Youth (an organization that provides information on reproductive health), transplantation organizations, the Centers for Disease Control and Prevention, and the National Institutes of Health, to name only a few.

"ER" is going into syndication this fall and the writers joke that we should put a cautionary date on each episode, indicating when that episode originally aired. In season one (1994-1995) we presented a story about a young man with AIDS who was treated for pneumocystis pneumonia. Dr. Ross offered him Bactrim and AZT. Two years later, when Jeanie Boulet tested positive, she began taking protease inhibitors, which had not been available previously. The medical treatment and management of HIV and AIDS has changed dramatically and so has our storytelling.

Neal Baer '96 is a resident in pediatrics at Children's Hospital of Los Angeles and a writer and producer for "ER."



Border Crossing

by Don Gibbons

Scientists have an obligation to communicate science to the public—an obligation to cross the border between the "two cultures."

When C. P. Snow's 1959 Cambridge College lecture "The Two Cultures and the Scientific Revolution" was published in the journal *Encounter*, it generated a flurry of academic and public debate. Much of that discussion concluded that the solution to the distrust between scientists and the literary elite, which Snow had outlined, was to raise the scientific literacy of nonscientists.

Since then, Snow and his thesis have lost some of their popular appeal. To begin with, Snow's credentials as a scientist were shaky at best. Rather than two cultures—science and humanities—there have proven to be more likely 20 or 200 cultures, each with its own dialect and moral high ground. And developing home-grown technologies in third world countries has often proven more effective than importing technology as Snow had proposed.

Yet, the 1960s solution of increasing science literacy continues to be a

drum beat of public policy debate. An international study of the equivalent of U.S. 12th-graders, released in February, placed our students well below the average and prompted President Clinton to declare, "There is no excuse for this." A 1996 study by the National Science Foundation gave only 25 percent of U.S. adults passing grades in science literacy and generated much hand-wringing.

Fretting over knowledge of specific facts and details, however, may not be the most productive starting point. Science literacy, taken literally, means an ability to read and write science. The lack of it is, notably, one of the reasons scientists most often cite for not wanting to talk to the public, or in particular, to the public conduit, the media.

A better goal might be to concentrate on the public's awareness of science and appreciation for science. Experts in the humanities have recognized this distinction between knowledge and appreciation for some time. Students who are non-majors in music, for example, generally learn how to distinguish styles of music, not how to write music. Cell biologists will never succeed in teaching the public how to decipher a kinase pathway, but they may be able to generate an awareness and appreciation for how understanding normal cell functioning gives clues to curing diseased cells.

Even a well-rounded scientist has trouble following the details of a study outside his or her field; witness the division of *Nature* into *Nature Medicine*, *Nature Genetics*, *Nature Biotechnology*, and *Nature Neuroscience*. In an extensive introduction to a 1993 re-release of "Two Cultures," Stefan Collini discusses various ways to view the changes in a map of the disciplines over the past three decades. One option, he suggests, is to view each discipline as the "intellectual equivalent of a microclimate," each with its own idioms and reference points.

To navigate this terrain, Collini suggests that we "encourage the growth of the intellectual equivalent of bilingualism, a capacity not only to exercise the language of our respective specialisms, but also to attend to, learn from, and eventually contribute to, wider cultural conversations."

While this is a worthy long-term goal, perhaps a more realistic goal is to strive for a traveler's bilingualism, a capacity to understand enough about another culture to enjoy and support its fruits, while respecting its limitations. Know how to pick something delectable off the French menu while having some idea of how the Franc (or Euro) conversion will impact your wallet.

If scientists decide they are willing to translate their work and speak in a bilingual mode, surveys suggest that the public is willing at least to step up to the border between the cultures and listen. Results from a focus group study and a telephone survey released by the National Cancer Institute last year showed that the public wants more from researchers—more information and clearer messages, particularly about research funded with public dollars. Participants said that consumers can understand science, and that the complex nature of scientific literacy does not absolve scientists

illustration by Erin Terry

from the responsibility of educating the public.

Similar calls for scientists to get more involved in reaching out to the public have come from various halls of government over the past two years. The most notable example was passage of the Government Performance and Results Act, which asks all government agencies that fund science to develop strategic plans to measure results, and then for Congress to issue "report cards." Its impact once fully implemented is still largely unknown, but it signals a new level of accountability in publicly-funded science.

The outgoing director of the federal Office of Management and Budget, Franklin Raines, warned of the imperative for accountability in science at a May colloquium held by the American Association for Advancement of Science. While he talked about the need to find some way to measure productivity and to strengthen the government/university partnership, he also discussed some softer aspects of accountability. He admonished scientists to "engage the American people in the excitement and wonders of science." More direct involvement of the research community in helping to improve K-12 education, he said, "is as important as anything we are doing at the university level." And he cautioned, "If science is not communicated to the American people, it is not going to be supported in the long run."

Surveys suggest that the public is willing to step up to the border between the cultures and listen.

This is particularly true for researchers working at medical schools and teaching hospitals. The immediate future for NIH funding looks bright, but it is unlikely to be sustained unless there is an increase in public awareness of how and where that research gets conducted. While more than 50 percent of NIH research is conducted at medical schools and teaching hospitals, the public only gives them 18 and 12 percent of the credit, respectively, for medical breakthroughs, according to a survey conducted for the Association of American Medical Schools last year. The bulk of the credit went to industry and to NIH itself.

Neal Lane, who recently ended his tenure as head of the National Science Foundation to become President Clinton's chief science advisor, has issued a call for "the civic scientist," who steps beyond the lab and engages in an active dialogue with fellow citizens.

"Scientists and engineers need to get away from their computers, out of their labs, off their campuses, and into community groups," wrote Lane in an opinion piece in the December 6, 1996, *Chronicle of Higher Education*.

illustration by Erin Terry

Dear Doctor

Nancy Rigotti '78—director of the Tobacco, Research and Treatment Center at MGH, assistant professor of medicine, and assistant professor of ambulatory care and prevention at HMS—spends most of her professional life writing grants and research papers. In addition to reporting on her tobacco research in such forums as *The New England Journal of Medicine*, Rigotti is also on the editorial board of HMS's *Women's Health Watch*, and is editing the women's health and preventive medicine chapters of the "Harvard Medical School Family Health Guide," now in the process of being compiled.

But here's something you won't find on her CV—she also writes a health column for the popular magazine, *Cosmopolitan*. After being chosen for the job from a number of physician candidates—her predecessor was classmate Susan Okie '78—Rigotti wrote her first column in 1991 with a mixture of enthusiasm and reluctance: "I'd never really read Cosmo, and didn't like the values that I expected were put forth in that magazine. But I decided that it was a chance to provide sensible advice to young women who might not get it elsewhere."

The "Your Body" column aims to give down-to-earth answers to questions that young women in their mid-20s might be afraid to ask their doctors, as well as advice on general health issues. The column, which addresses health-related questions regarding sexual behavior, birth control, STDs and body image, among other topics, provides valuable information to its readers, who are mostly women in their 20s and

"They need to have a dialogue with the American public about the role of science in society.

"All scientists should help to educate the public by talking with citizens at least a few times a year in settings in which scientists are rarely seen—at meetings of service organizations such as Rotary Clubs, the League of Women Voters, school boards, chambers of commerce, and city councils, particularly when complex issues of a technical nature are discussed."

Collini, in his forward to "The Two Cultures," went further, suggesting that such activity should be a mandatory part of a scientist's portfolio. Attending to public awareness, he said, "is not some kind of off-duty voluntary work, but is an integral and properly rewarded part of professional achievement in a given field."

This imperative is being given at least verbal recognition from the bully pulpits of many deans and academic leaders around the country, but it is rarely rewarded in any traditional academic sense. Several exceptions have begun to develop at HMS. One is that academic credits are given to graduate students who teach in area high schools. Similarly, faculty committees are looking into ways medical students may be given credit for community health education outreach efforts.

"Scientists and engineers need to get away from their computers, out of their labs, off their campuses, and into community groups."

—Neal Lane

It is harder to quantify these efforts among faculty, but Dean Joseph B. Martin has sent a letter and survey to all Quadrangle-based faculty asking them to get involved with the community and querying them as to their willingness to talk to the media, speak at civic organizations, or talk to high school classes, among other activities.

"Communicating the research we do here beyond the scientific community is an essential part of our educational mission," wrote Martin in the faculty letter. "The public will not continue to support the work we do here and its federal funding unless we do a better job of engaging them in a dialogue that imparts a broader understanding of science."

The public affairs or communications offices at most medical schools and teaching hospitals are eager to help medical researchers translate their work for the public, and develop skills in talking to the public.

"This is not a matter of idealistic rhetoric," wrote Lane in closing his *Chronicle* article. "It is a matter of pragmatic engagement. We must step out of out labs and into out communities, because doing so will make us better scientists—and better citizens."

Don Gibbons is director of public affairs at Harvard Medical School and former editor-in-chief of Medical World News.

30s. "This column gives me the chance to provide information to a large audience, and to promote a healthier view of women than that shown on the magazine's cover or in its ads."

Most recently Rigotti has had the satisfaction of debunking some popular myths: she has informed readers that there are healthy ways to lose weight, and that bulimia is not one of them; and that there is no such thing as a hormone product that increases breast size. Despite the ads for alternative products in *Cosmo*, she has told readers about the dangers of using herbal remedies—most of which are not approved by the FDA. And cigarette ads aside, she recently used her expertise as a tobacco researcher to give readers advice on how to quit smoking. In addition to its educational value, the *Cosmo* column also gives Rigotti the satisfaction of dispelling unnecessary health concerns on the part of her female readers.

Rigotti says that the column also provides a refreshing contrast to the kind of writing she does in her research work. "When I write for academic journals the response is likely to be, 'Here's what's wrong with your article' and, if I'm lucky, 'Do it over.' When I send a column to *Cosmo*, the editors say 'thank you' and send me a check."

Sarah Jane Nelson

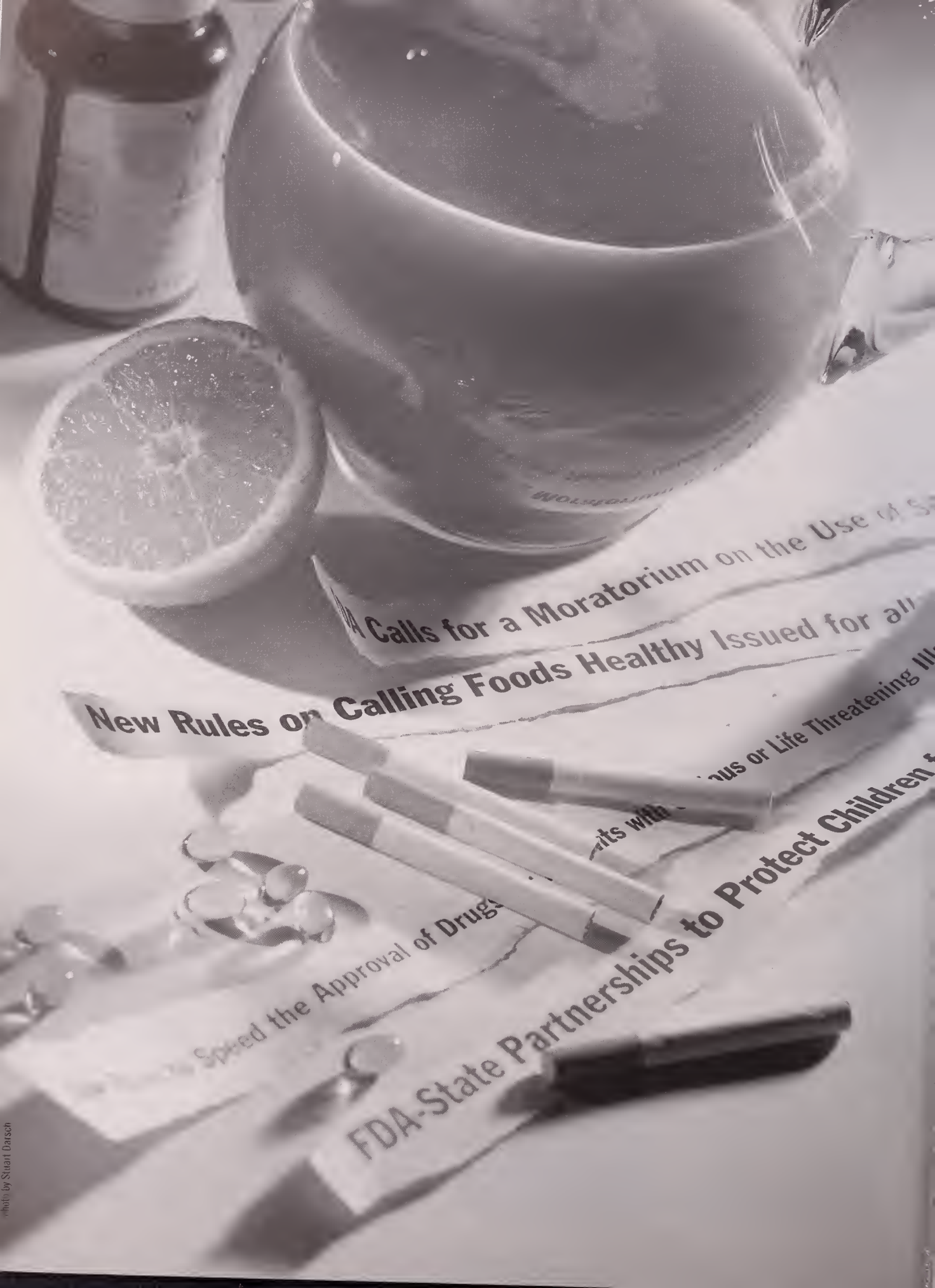


Photo by Stuart Darsch

Pressing the Issues

by Ellen Barlow

A BOLD AND ENERGETIC COMMISSIONER of the Food and Drug Administration for six years, David Kessler '77 was continually in the news. Since last July he has taken on a different set of challenges as dean of the Yale University School of Medicine. But looking back on his FDA years, Kessler describes his impressions of the importance of the media in promoting public health and policy.

"The media have an enormous role, but I didn't realize at first how essential they are to the process of change," he comments. Kessler speaks about the media as if they were allies in his crusades, with a great deal of respect, and despite prompting, with no complaints about the downside of their coverage.

Through extensive media coverage, Kessler himself began to personify a new, action-oriented FDA, though he maintains that it was not coverage of him that was important.

From the start of his appointment by then-President Bush in 1991, Kessler announced that he wanted to restore the credibility of the FDA and reaffirm how seriously the agency took its role in protecting public health "for the foods we eat, the drugs we take, and the medical devices we use." Consumer protection included the traditional safety issues, but Kessler also wanted to resurrect the other goal of the original Food and Drugs Act of 1906: to promote honesty and fair dealing in the marketplace.

Soon after taking office, he ordered the FDA to pull thousands of gallons of orange juice off grocery shelves because they were labeled "fresh" but actually were made from a concentrate. It was all over the headlines.

"This decision was announced in a small room with 50 individuals," comments Kessler, "but it wasn't what happened in the room that generated response, it was the way it was seen. It sent a signal that we meant business." Companies voluntarily lined up to comply after that, he says. "This effect of the media was illuminating to me."

The FDA also cracked down on other misleading food labeling— "no cholesterol" products that were high in fat, foods marketed as "fat free" that weren't—and in 1994 announced new rules that required manufacturers to list fat, calorie and fiber content. During Kessler's tenure the FDA also shortened the review time for new drugs

and devices from almost three years to nineteen months, and improved standards for mammograms.

But the action for which he is most likely to be cited in the history books is taking on tobacco regulation. Under his leadership the FDA campaigned to regulate nicotine as a drug and was successful in restricting tobacco sales to children and teenagers and advertisements aimed at them. Tobacco regulation was not even whispered about in Congress in 1994 when Kessler and the FDA started asking why not. In this context, 1994 was so long ago that a tobacco company president was quoted then as saying that smoking was no more addictive than gummy bears.

One might call these actions controversial, but Kessler, who is a pediatrician by training, comments that he "never really understood what was so controversial about it."

He points to what happened with tobacco regulation as a prime example of how integral the media are in the process of change. "We asked ourselves why the government, or why the FDA didn't regulate tobacco, and then set about to determine what it would take to get the government to move down that path," says Kessler. To effect any change in public policy requires asking the right questions, gathering the facts, conducting the investigation, and obtaining the documents that make the case. "But then you need public support—especially on these big questions—to get Congress to change public policy."

The media, he says, play a critical role in the process of finding the facts and helping to shape the way the American people view a problem. "People in the media took a stand at a time when it was very difficult to do so. Walt Bogdanich of ABC was sued for $10 billion after he did the first nicotine exposé on "Day One"; Mike Wallace did a "60 Minutes" piece that CBS wouldn't air; Alix Freedman of the *Wall Street Journal* won a prize for her reporting. Many reporters played key roles in shaping the debate."

A tobacco company president was quoted then as saying that smoking was no more addictive than gummy bears.

At a March 1994 congressional hearing Kessler presented evidence and accused tobacco companies of manipulating the levels of nicotine in cigarettes, forcing the tobacco industry to respond. "One image that changed the debate more than anything else is still etched in my memory," he says. "It was the picture of tobacco industry executives taking the oath. It was on the front page of all the newspapers the next morning."

Despite industry resistance, FDA regulations for reducing addiction to cigarettes and smokeless tobacco in children and teenagers finally went into effect in 1997. As stated in the FDA's executive summary of the ruling: "The wealth of information assembled by the agency about nicotine's addictive properties led the FDA to conclude it has jurisdiction over tobacco products. The age of onset of nicotine addiction, and its well known consequences, suggested the best way for the agency to regulate tobacco to protect the public health." Since use of tobacco begins predominantly in children and adolescents, they declared it "a pediatric disease."

The Clinton Administration supported this and since then other initiatives to reduced teenage smoking. There are many more supporters of tobacco legislation in Congress now than in 1994, such as Senator John McCain (R-Arizona), whose bill before the Senate would force tobacco companies to pay billions of dollars to compensate for past practices that encouraged teenagers to smoke. "There is much broader consensus now and tobacco specialty interest groups have vastly diminished credibility," says Kessler. "Why that shift? We made the case to the American people. And the media was critical in doing this."

One of the few battles that Kessler's FDA did not win was over the regulation of dietary supplements—vitamins, minerals and herbs taken for effects that range from enhancing memory to curing cancer. Since they are not under FDA jurisdiction, their safety and efficacy does not have to be proven, nor are they constrained from making claims of benefits. How could the FDA get so far on tobacco legislation and not on dietary supplements?

"The good news is that dietary supplements don't kill people, although there may be misleading claims and even fraud," responds Kessler. "There was an enormous public relations campaign that had grass roots support. I guess we weren't able to make that case as well. But one day it will be made."

Another saga in his tenure with the FDA—that of the silicone gel breast implants—also generated a flurry of media response. The mere fact that a consumer protection agency put a moratorium on their further use implied they were not safe. The FDA, however, did not take action because the device was not safe. They issued a statement that "the data supplied by the manufacturers were insufficient to establish that the implants are safe and effective." But that nuance was often lost in the reporting.

There was much criticism of the FDA about this decision (in the medical community most notably from Marcia Angell, MD, who wrote a book about the controversy). But the point might also be made that the media coverage did not convey the subtleties of the FDA decision and in a "feeding frenzy" following the story, helped trigger

panic in the women who had silicone implants. This in turn prompted law suits against their manufacturers, and the eventual bankruptcy of one manufacturer.

"There is a distinction between a company not having the data to prove a product is safe and showing that it is unsafe," says Kessler. "But it's a subtlety that was lost not only in the media. People still don't understand."

Asked if he had known the reaction, would he have handled the announcement any differently, Kessler responds: "In retrospect I wish that the industry had not ended up in the kind of battle it did. I wish I could have persuaded them not to fight us before there was all the publicity." Rather than publicly resisting the FDA moratorium, Kessler says it would have been helpful if the industry had acknowledged they didn't have the data, and that there shouldn't be any more implants until they did. "It was a very hard call to make, but we couldn't allow something to continue to be implanted for which we had received widespread reports of adverse reactions."

Kessler resigned after six years with the FDA, straddling a Republican and a Democratic presidency, to become dean at Yale in July 1997. A pediatrician, lawyer (he started law school at University of Chicago while he was an HMS student), medical director (1984 to 1990 at Einstein Hospital in the Bronx), FDA commissioner—he now adds dean.

At a symposium welcoming him to Yale, he commented: "I always have and always will be a staunch supporter of public service. But I must tell you that the transition from the public sector to the private has presented me with fewer problems than I would have thought, for I see no difference in the goals that occupied me there, and the commitments that will occupy me here." By that he meant the commitment to preserve and strengthen the health of the public.

His name will still pop up in the media occasionally because a few issues, such as tobacco regulation, will lure him out of New Haven. But he claims that he does not miss Washington, DC at all. "I'm trying to walk away and not look back."

Ellen Barlow is editor of the Harvard Medical Alumni Bulletin.

Former FDA commissioner, David Kessler

The Art of Being There

by Eileen McNamara

photo by Stuart Darsch

THE OLD WOMAN'S DOCTOR IS OUT OF synch with the times.

He knows that the cost of managed care is minimal caring, but he still makes house calls. Even now, when there is nothing in his black bag to save her, he climbs the steep staircase to sit with the woman he has known so long.

She has little to say these last cold days of winter, but she stirs at the sound of his footfall on the creaking steps. The slope of her shoulders straightens; her smile is a gift she no longer gives just anyone.

They have known each other for 26 years. Fresh from his fancy medical training at Harvard, he was beginning to build his practice when their match was made. He needed patients; she needed a doctor. Dr. Macklin had died, as had Dr. Mullen before him, depleting the supply of graying local Irish medicine men.

She had her doubts about this fellow with his Groucho Marx moustache and his dark-rimmed glasses. Charlie Hatem, what kind of name was that, anyway? And yet, there was something in his manner—straightforward, no-nonsense—that she knew, instinctively, might lead to a relationship like no other.

The young doctor took the not-yet-old woman on as a new patient, but she took him on, too. She came to see herself as a silent partner in his career. She was delighted to oblige when he would ask to have a medical student join them for an appointment. Not every patient was a willing to be part of a teaching opportunity. Her doctor was a natural teacher, she boasted; but, then, she was some case study!

She watched him rise through the administration at Mount Auburn Hospital and through the teaching ranks at Harvard, her pride a mother's pride when he was acknowledged, her pique a mother's pique when he was passed over for a post he deserved.

As she watched him grow, he watched her grow older. He was there for all the infirmities that come with time, the small ones like the arthritis in her leg, the big ones like the aneurysm in her heart. She knows the names of all his children. He knows so much more than that about all of hers.

Her husband used to mock her affection for her young doctor-friend until he found himself in fatal circumstances. By the end of his own struggle, he had to concede that she had a point about this fellow.

There were tears in Charlie Hatem's eyes last summer when he told the old woman that the shadow on her lung was cancer. They were mirrors of one another, shocked but stoic, sitting two feet apart on that brilliant July afternoon. Predictions of life spans are best left to celluloid physicians, he said. Just right, she agreed. Better a battle plan for the present than anxiety for the future, he said. Oh, right again, said she.

He began a long-delayed sabbatical the week the old woman's cancer appeared. It was unspoken that an exception would be made for her. He sat with her while Carbo-Platinum dripped into the veins of her pale, freckled arm. He stayed at her side during CAT scans, explaining to her daughter that "Mother gets claustrophobic." He shamed her into working harder at physical therapy. He was the first to visit when she returned to live out her last days in the house that has been her home for 50 years.

On any given day now, the no-longer-young doctor drives down her small dead-end street to the three-family house in North Cambridge that rattles when the commuter trains go by. He sits in the same spot on the same couch where the old man once sat. She sits across from him in the chair that has been hers alone for so long now that its faded brown cushions conform to the shape of her body.

Their mutual regard is of the sparest, simplest and most profound sort. "You're OK?" he asks, accepting her shrug as the nod it's intended to be.

This is not how life ebbs for everyone in America. Too many old women die alone, in antiseptic hospital rooms, straining to read the plastic name tags of the strangers ordering up their morphine drips. Not this old woman. She sips her tea and takes her doctor's arm when it is time to lie down for a nap.

She wasn't sure about this young fellow 26 years ago but, it's fair to say, on this morning in March, the old woman knows, in the deepest chambers of her fading heart, that Dr. Charles Hatem has worked out just fine.

Eileen McNamara is a columnist for The Boston Globe, *where this article first appeared on March 14, 1998 as "Doctor Serves Old Friend Well."*

Reprinted courtesy of The Boston Globe.

Legacy of the Village Healer

by Diane Speare Triant

THIS MEMOIR/NARRATIVE IS BASED ON the recollections and videotaped oral history of George Spyrounes Speare '25 who died in December 1989.

My parents tell me that I was born in February 1897 in a little village near what is known as Pirgos Dirou in the southern part of Greece. My grandfather was a practical doctor in the area. He had inherited certain curative items from others who had served before him, such as a stone to treat the eyes. He was sort of like the barefoot doctors of China, and anyone who got sick would seek him out. During that time a woman with smallpox arrived from Athens. No one knew what her illness was, so my grandfather took me along with him, as he had done before, to see the patient.

The visit proved to be a disastrous mistake on the grandfather's part, for within a short time three-year-old George K. Spyrounes (later shortened to Speare) became one of six children stricken with the disease. Public health authorities ordered all victims of smallpox to be isolated in separate quarters, with no family contact. The grandfather chose to ignore the official warnings and took up residence with his grandson. Although the child's mother attempted to tell him stories through an open window, it was the grandfather who stayed by his side, feeding him and bathing his fevered head. More than a half century later, pursuing his grandfather's calling and still bearing the telltale pock marks on his face, Speare would witness the total eradication of the devastating illness.

Healthy once again, the young boy returned to his home which was built into the hillside and constructed entirely of large stones native to the area. Mani, as the region in the Greek Peloponnese south of Mount Taigetos is known, has an arid terrain where little green growth interrupts the inhospitable gray palette of scattered rock and matted earth. Even the dusky olive trees take on the forbidding nature of the atmosphere, imposing their gnarled silver-gray shapes across the acres of parched land dropping down to the Aegean Sea.

Young Speare and the other village children played with whatever they could find. Manufactured toys were unknown, but sticks picked up from

photo by Stuart Darsch

the ground and a remarkably resilient ball derived from the cud of the family cow served as excellent playthings. The children frolicked in the freshwater springs and enjoyed the company of pets (farm animals actually shared the family living quarters, in the open lower level of the houses).

It was soon time for Speare to attend his first school—the beginning of his lifelong quest for education. The primary school consisted of a room with four benches, one for each grade. The teacher was a young man in his 20s, and his instruction focused on familiar agricultural themes such as growing olives and making olive oil.

The boy progressed to a middle school with three grades, which was located four miles away in the town of Areopolis. In order to attend this school, it was necessary to live in town during the week and walk back home over the jagged terrain on the weekends. Shoes were required of all students. But since Speare had only one pair to his name, he would traverse the rugged miles barefoot, carrying his shoes to preserve them for the classroom. The school harbored other hardships as well.

He would traverse the rugged miles barefoot, carrying his shoes to preserve them for the classroom.

I remember a particular teacher we called 'the old man,' who was a big disciplinarian. He loved to punish children, and the punishment consisted of a long stick from an olive tree. One day we were doing a little gambling. This activity was prohibited, so we went far out into the fields where we were gambling with pens and with the buttons from our clothes. The old man caught about twenty of us and brought us to the office with the evidence. We were guilty. My hand was struck so hard I thought it would remain paralyzed.

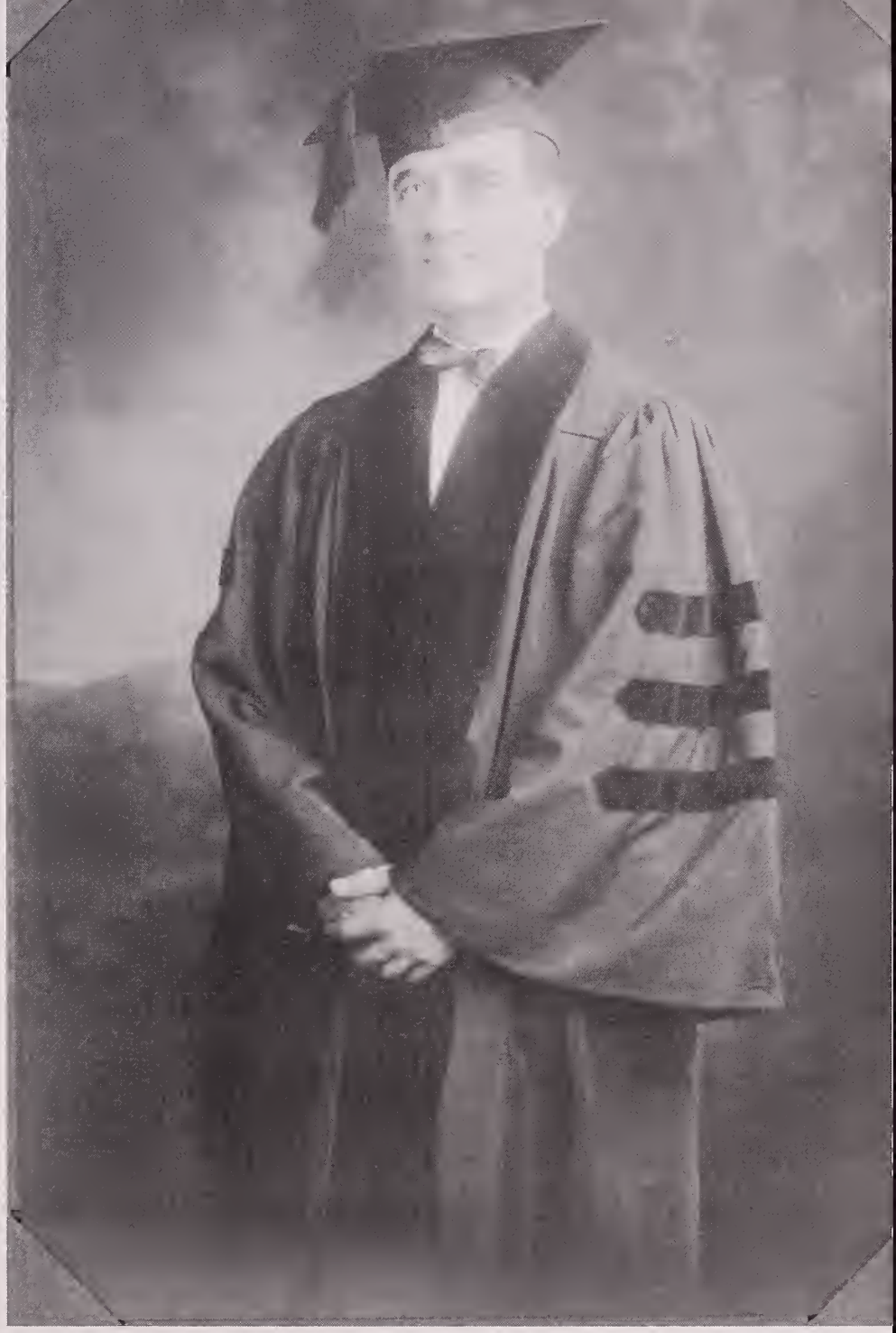
A more ethereal event sparked fear in the entire community: in May 1910 the nighttime skies were suddenly ablaze with a frighteningly intense light. The villagers, unaware that this celestial curse was Halley's Comet paying its cyclical 76-year visit to earth, filled large tubs with water each evening. As the comet followed its path across the sky, they would submerge their heads to protect their eyes from going blind.

Despite these distractions, Speare responded well to the middle school instruction in the Greek language, history, fractions, and French and Latin. Recognizing his aptitude for learning, the headmaster urged the boy's father to continue his son's schooling at the gymnasium (secondary school) thirty miles away in the town of Gythion. But the move would necessitate paying rents and eating in restaurants, and the father of seven firmly refused. Advanced education was a luxury few in the village could afford.

My father's decision left me quite sad. From 1910 to 1912 I had no schooling. I was helping my father prune and plant olive trees and tend to our animals—mules, cows, horses, sheep and goats. But I felt depressed. I had occasion several times to be humiliated by classmates who

Speare in the window of his Longwood Avenue room.

To lose a beloved son, not to mention a precious male worker in the olive grove, was unthinkable.



had gone on to gymnasium, and who considered themselves very important. One time during this interval my father took me to Gythion and I met a schoolmate with a newspaper sticking out of his pocket—a pretentious sign of being educated. I greeted him and he was aloof. He was a student in high school and I was nothing. Another time I came upon my former roommate from Areopolis. I had to remind him who I was, and he responded, 'Oh, yes.' It was a polite snub and a big trauma to my self-esteem. I continued with my desire for education and determined that I had to have it somehow.

An opportunity presented itself when Louis, an older cousin who had emigrated to the United States, paid a visit to the village dressed in his straw hat and cream-colored suit, with money in his pocket from a lucrative factory job. He suggested that his teenage cousin come to America with him, where he could at least learn English. It took Speare several months to convince his parents of the merits of the plan. To lose a beloved son, not to mention a precious male worker in the olive grove, was unthinkable. They finally agreed to a trip of not more than three years.

Cousin Louis, who had returned home, sent the fare for the ticket. So the 15-year-old set out to cross the Atlantic on his own, his only connection to home a warm orange blanket woven for the passage by his grandmother.

It was late spring of 1912, and although the passengers were booked on the maiden voyage of a brand new ship, the recent fate of another brand new ship, *The Titanic*, was always on their minds. Speare remembers anxiously watching the ocean for signs of pack ice, while feeling constantly seasick. A budding friendship with another teenage boy, also on his own, served as a distraction. The two became explorers, scampering up ladders to the higher decks of the ship by day, and returning at night to sleep in their lower quarters crammed with bunks.

When the docking at Ellis Island eventually occurred, Speare was to lose

his new companion. The inspectors found evidence in the boy's eyes of trachoma, the contagious condition which could lead to blindness. They forbade him entry and ordered him onto another ship that was returning to Greece. Speare, alone again and unable to speak English, managed to convey to translators that he was traveling to Lowell, Massachusetts. He was guided to the train station with a large sign pinned to his coat, alerting the conductor to his destination.

Once in Lowell, the teen found shelter with cousin Louis and set about learning English and continuing his education. A special evening language school had been opened for the 18,000 Greek immigrants in Lowell, and was a good starting point. Within three years he progressed from the immigrant school to the regular evening grammar school, and then to the evening division of Lowell High School, always wondering how he might break the barrier to the day high school—an attainment which had thus far eluded any aspiring Greek student.

When Louis left to fight in the Balkan wars and then WW1, Speare had to rent his own space for twenty dollars per month. He strung together a series of jobs to support himself.

He was guided to the train station with a large sign pinned to his coat, alerting the conductor to his destination.

I had a job in the shoe factory. I was bringing the uppers of the shoes sewn by the girls on the floor above on a string to where they had the machines which attached the soies. I also sold ties and undershirts in a haberdashery . . . . And I had fifty ball gum machines from the Chiclet Company which I placed in various stores. I was allowed to keep twenty-five percent of the profits, and was also given some shares in the company. The pharmacist in one of the stores on my route asked me to work there. It became a permanent job, cleaning up showcases, doing window displays, and working at the soda fountain.

By 1915 my desire for education was inflamed, because I had been five years without regular daily schooling. So I went to the office of the day high school to request permission to attend. There were no Greek boys in the high school as yet, but the principal was very receptive. He told me to come back on Monday, when I would have to pass a test given by one of the teachers.

Speare was dismayed to hear from other students that the test might include algebra, a subject he had never studied. So over the weekend he pored over algebra texts taken from the library and taught himself the basic elements. The teacher, however, only asked that he write a story about the Greek headmaster in his former school. Although the prospective student's grasp of English left something to be desired, she decided to pass him, and the next day he officially entered Lowell High School.

In high school I was amazed with the goodness and the kindness of the school teachers and the other students who were all younger than I was. People were talking about various prejudices in the factory, but at the high school they treated me royally. If I was deficient in something the

George Speare (seated, second row from bottom, far right) and fellow surgical residents at MGH, 1927.

George Speare surrounded by his family in 1988.

Speare's early memories of his grandfather were reawakened. Thoughts of continuing the family healing tradition took root.

first year, it was overlooked. In general I was doing quite well, but when it came to lines in Shakespeare such as 'I know not why I feel so sad,' I was quite lost!

During these high school years, Speare's duties at the pharmacy were expanded to selling over-the-counter medications. In 1918, during his senior year, the great flu epidemic struck and closed the school down for six weeks. Doctors would anxiously visit the drug store to pick up prescriptions and remedies for their patients who had fallen victim, and Speare's early memories of his grandfather were reawakened. Thoughts of continuing the family healing tradition took root.

I had made up my mind to become a doctor after seeing the doctors in the drug store . . . .Two teachers at the high school were Harvard men and took an interest in me. I didn't know much about college at the time. They said, 'Well, the best place you can go is Harvard.' So I thought I would go directly from high school to Harvard Medical School. The teachers explained to me that I had to attend college first, so I applied to Harvard College.

But I wanted to go to see the medical school. So one afternoon I took the train to Boston and asked at North Station how to get to the school. I took the streetcar, and eventually arrived at the beautiful buildings on Longwood Avenue. I walked through the Quadrangle to the main office, and told the woman at the desk that I was a student at Lowell High School and had come to see the dean [David Linn Edsall, in his first year of office] because I planned to go to medical school here. It didn't occur to me to be embarrassed. When the kind dean heard my request, he responded, 'Bring him in.' I sat down and told him my story and he listened and said, 'Well, my boy, you seem to be doing all right. Now if you keep on this way, go to college, and pass all the examinations, we'll be glad to have you.' He spent about ten minutes with me. So I left satisfied and went back to Lowell.

By senior year Speare was comfortably acclimated to American schooling, performing well in his studies, serving as captain of the student military regiment, and even writing an Athenian romance for the school literary paper. In the spring he applied to college. After passing four days of written examinations and an afternoon practical test in chemistry and physics held in a Harvard science laboratory, he received a letter the following week accepting him to Harvard College.

His first college residence was a spacious suite for four students in D-21 Gore Hall, the new dormitory by the river. A scholarship from the Lowell Harvard Club helped him meet his annual college expenses of approximately $800, which included "instruction; rent and care of room; board; tobacco ordered at dining hall; rent of gymnasium locker; Harvard Union house charges; and a fee for installation of electric lights."

I stayed at Harvard College from 1919 to 1921, because at that time if you were a good student you were allowed to apply to the medical school after two years. Well, I made every effort to do that. I took six courses, although four were the average. At the end of the second year I applied to the medical school and they accepted me.

The new students settled into rooms on Longwood Avenue, near the site of the proposed dormitory to be built on the corner of Avenue Louis Pasteur. He was soon introduced to the rigors of anatomy by Frederic T. Lewis. Lewis pointed out that the first-year student views anatomy as "all ye know on earth, and all ye need to know," but soon comes to agree with Pasteur's biographer that it is, more humbly, the

discipline of "city-errand boys, aware of street names and house numbers but of nothing that goes on inside."

Even with a medical school scholarship, it was a constant struggle for Speare to meet expenses, so the summers were once again filled with inventive ways to earn cash. Back in Lowell, he put up a sign in his window announcing the "George Spyrounes Summer School," teaching English to immigrants for three dollars per course and five dollars for private lessons. Ironically, one customer was a man working in a factory who was willing to pay to learn algebra—vindication for the long-ago weekend cram session! A six-week stint in ROTC brought in the additional income of a first lieutenant's pay, thirty-one dollars per week. And Speare and a Greek friend at Harvard College, Telemachos Maktos, started a newspaper for Greek students in the area, which sold for ten cents a copy.

But the most lucrative venture of all was the forty barrels (2,000 gallons) of olive oil that Speare's father, now resigned to his son's living in America, shipped him from Greece. The family had built an olive press that serviced all the village groves. It was operated manually by crushing olives between flat, cylindrical stones, thereby releasing the oil. Speare rented a storefront in Lowell and sold the oil retail in small tins for $2.10 per gallon, a dollar less than the going rate. Although his expenses ate up much of the profit, by September he had $1,500 in the bank—a princely sum to support his medical school years.

The early 1920s was a lively era in America and Speare and his fellow students, despite financial limitations, managed to enjoy themselves outside the classroom. Harvard football games were all the rage, and the Harvard varsity football team even went to the Rose Bowl in 1920 (its only appearance there), facing the University of Oregon. Speare remembers feeling privileged to be the third "George" at

Harvard Stadium one Saturday afternoon in company with Harvard football great halfback George Owen, and the French prime minister George Clemenceau, who was in the stands that day.

In the era of silent movies, live theater was very popular, and the young men took in many productions in Boston, often sitting high in the balconies in "student heaven" for fifty cents. Among the shows they enjoyed were Sigmund Romberg's musical *Lovebirds* at the Shubert-Wilbur Theatre, David Belasco's comedy *Call the Doctor* at the Tremont Theatre, Richard Sheridan's *The Rivals* at the Copley Theatre, and *Wellesley College Night* at the Boston Pops, then in its 36th season, at Symphony Hall.

At that time, many of the stores in Harvard Square had Greek owners, and the proprietors treated Speare like a favored son. One establishment in particular, Felix's Barber Shop, was run by a generous man who let the students store their belongings in his store's basement. When Speare crossed the river to go to medical school, he left a trunk with Felix, not bothering to reclaim it for many months. When he did, he was dismayed to find that someone else had taken it. Among his missing posses-

sions were the shares of Chiclet stock, which he had stored away as useless, from his gumball days. In his later years, as the Dow Jones soared, he would often lament this carelessness!

The medical school routine for the first three years consisted primarily of lectures from 9:00 AM until 3:00 or 4:00 PM. Classmates agreed that the instruction in obstetrics, orthopedic surgery, and pathology were particularly outstanding. After the third year students took the National Board of Medical Examiners' test, qualifying them to practice medicine. Candidates from eighteen medical schools across the United States sat for the examination. When the results came in, Speare had received the highest grade.

The Johns Hopkins man came in second. There was a rivalry between the two schools, so I became popular when the results were announced in a bulletin!

The final year of medical school was devoted to clinical training, with daily visits to the teaching hospitals to perform physical examinations and write patient histories. E. P. Richardson, who was conducting research on jaundice, and Walter B. Cannon, renowned physiologist, were two respected mentors. In the spring, the internship assignments were announced, and Speare was matched with the surgical service at Massachusetts General Hospital. The final hurdle was the general examination.

At the end of the year we had a general examination on the entire four years of medical education. We all sat there as the professor came onto the platform. We were surprised that he did not hand out printed questions as was usually the case. Instead, he went to the blackboard and wrote two words: Discuss peritonitis. "Now," he said, "if you waut to go to the library, or look up your notes, you're welcome to do so. I will be back in four hours to collect your papers." I knew I could not simply say that peritonitis was an iufection of the peritoneal cavity, so I started with embryology—how the peritoneum covering the peritoneal cavity is formed. I went on to other disciplines: anatomy—how it looks; physiology—its function in absorbing excess material; and finally on to the actual disease itself.

At this point it was really the end of my formal education in schools. I remember when I took my degree at the end of the year in Harvard Yard and I was going home in the afternoon holding it, a feeling of sadness came over me. After working all these years—it was thirteen years from the time I had landed in Lowell until graduation day—and completing all that schooling, I was walking home. But there wasn't anyone to see at home. I had no family. So I stopped at a telegraph office and sent a telegram to my father. I told him, "Today I received the degree of Doctor of Medicine from Harvard Medical School."

When the results came in, Speare had received the highest grade.

* * *

George S. Speare '25 was the first person of Greek background to train at the Massachusetts General Hospital, where he remained a lifelong member of the surgical staff. He maintained a private practice for 44 years at 353 Commonwealth Avenue, Boston. While a medical intern, for his own satisfaction, he completed the work for his AB degree *cum laude* at Harvard College, thus receiving his college degree a year after his medical degree. During America's bicentennial year in 1976, he was named a "Grand Bostonian—The People's Choice," by the *Boston Herald*. He resided in Newton, Massachusetts with his wife Athena (Stavros) and daughters Cynthia, Jean and Diane, until his death in 1989. His family's medical tradition is being carried on by his son-in-law, George P. Canellos, the William Rosenberg Professor of Medicine at Harvard Medical School, and his granddaughter, Virginia Triant, a first-year medical student at Yale University School of Medicine.

Diane Speare Triant is a freelance writer residing in Wellesley Hills, Massachusetts. She is an alumna of Harvard Graduate School of Education (EdM '71) and the daughter of George S. Speare.